

# THE MILLING WORLD

AND

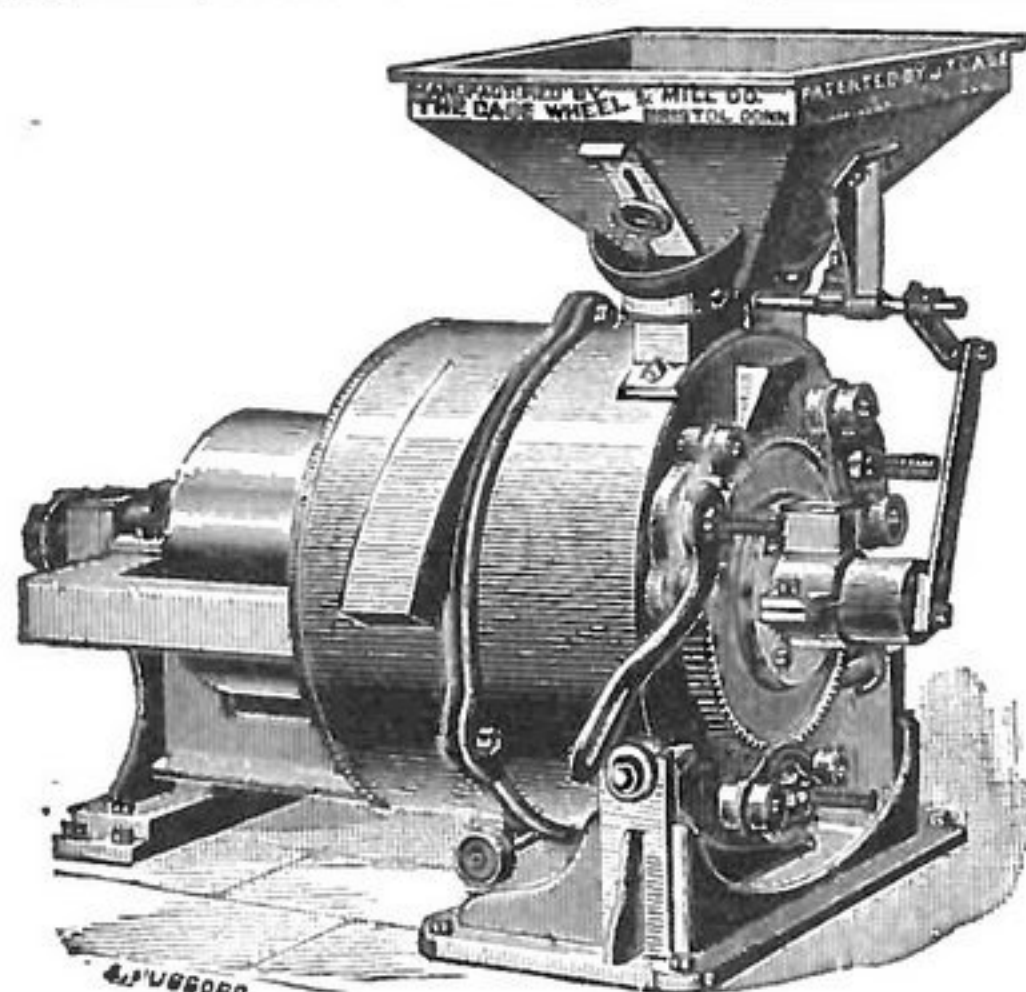
## CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY MORNING.

VOL. XX. No. 25.

BUFFALO, N. Y., AUGUST 19, 1889.

\$1.50 PER YEAR.



### VICTORY OVER ALL OTHERS. SINGLE & DOUBLE VERTICAL GRINDING MILLS.

(J. T. CASE'S PATENT.)

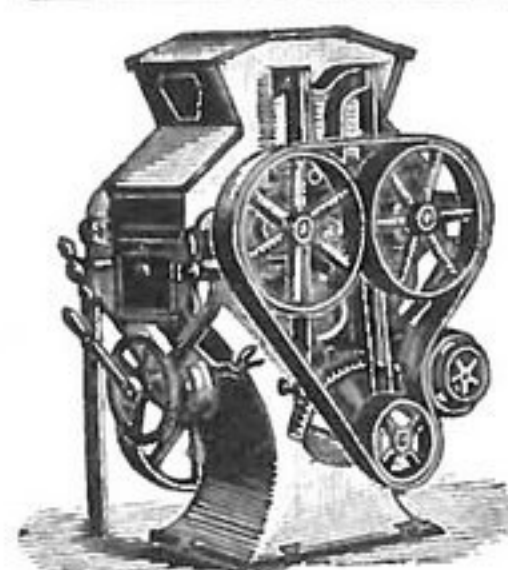
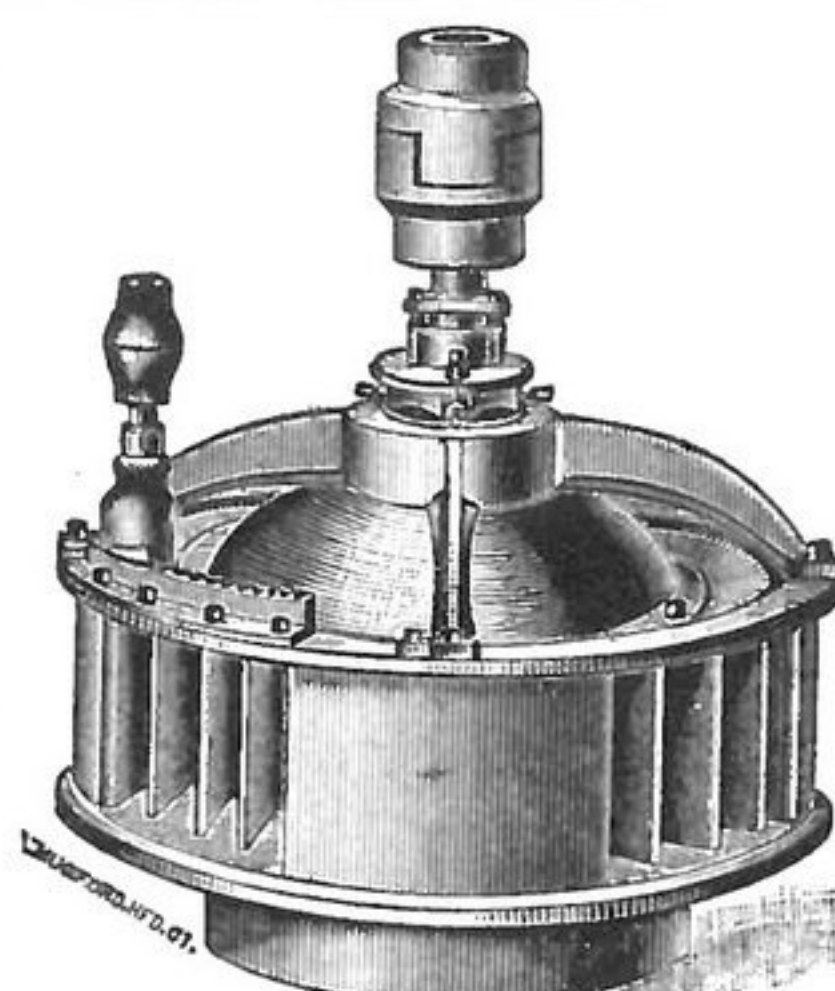
FACTS ARE MIGHTIER THAN ASSERTIONS. READ WHAT THEY SAY:

"Our 20-inch mill made by the Case Wheel & Mill Co. is in every respect satisfactory, easy to handle, and best results obtained of any mill in the country, with same quantity coal and power."—A. S. RUSSELL & Co., Meriden, Conn.  
 "Superior to any mill in use."—Geo. WESTON, Bristol, Conn.  
 "The best satisfaction in quantity and quality."—CHILD'S ELEVATOR, Manchester, Ct.  
 "We take pleasure in recommending it."—GARLAND, LINCOLN & Co., Worcester, Mass.  
 SEND FOR CATALOGUE—ILLUSTRATED AND DESCRIPTIVE.

### The Improved National Turbine Water Wheel

The Best for Economy; The Best for Durability; The Best for Power. ONE THOUSAND FIVE HUNDRED NATIONAL WATER WHEELS IN USE Prove that our Assertions are Supported by the Leading Manufacturers in the Country. Send for illustrated catalogue and prices to the manufacturers.

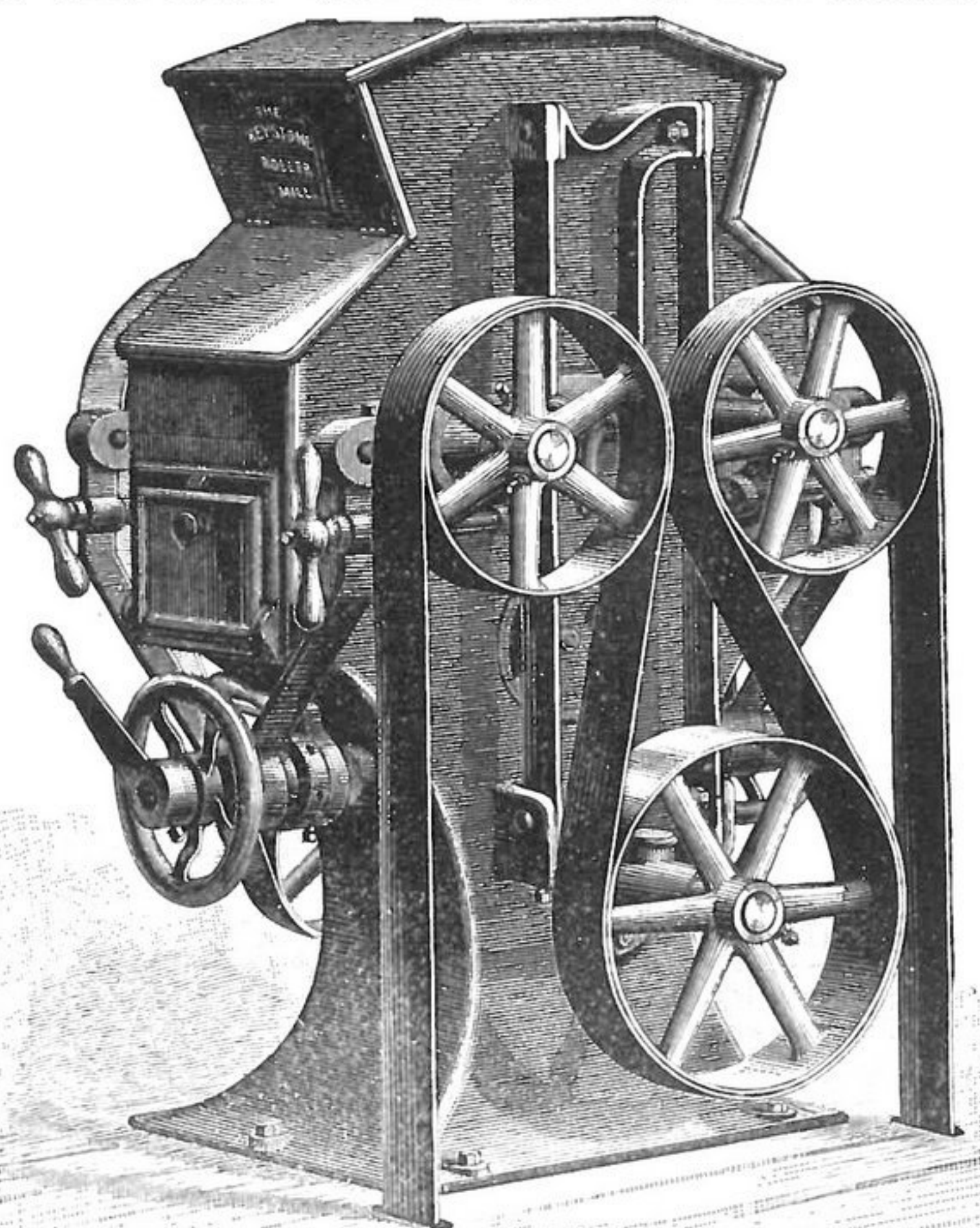
The Case Wheel & Mill Co., Bristol, Conn.



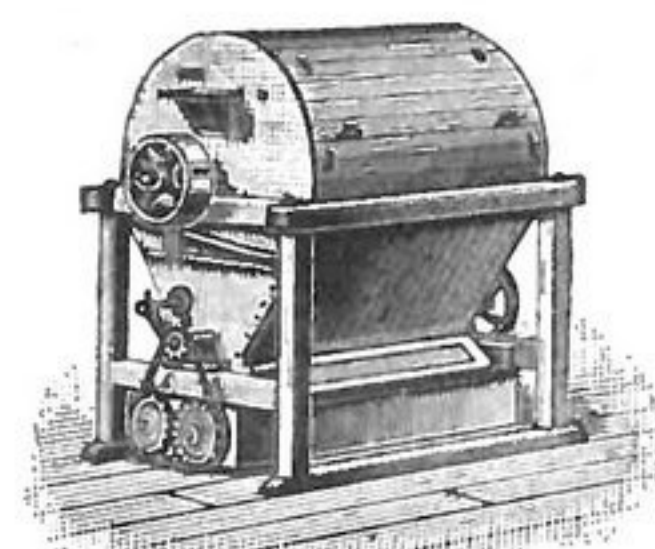
Wheat Roller Mill.

## THE "KEYSTONE"

WHY IS IT THE BEST ROLLER MILL IN THE MARKET?



THE KEYSTONE FOUR ROLLER MILL.



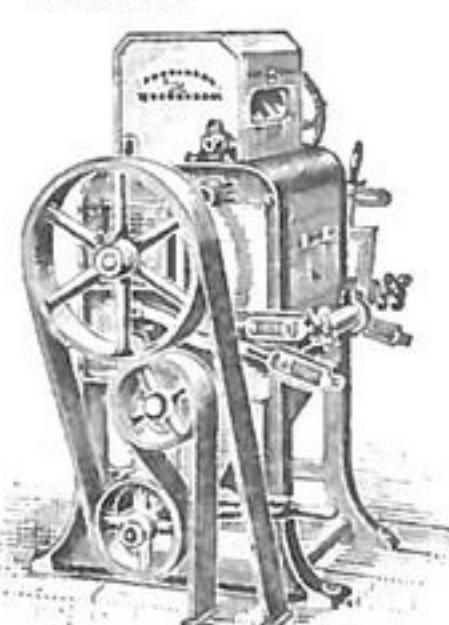
Bran Duster.

BECAUSE the adjustable roll is not pushed against its mate but is held rigidly to it, which takes out all vibration.  
 BECAUSE it does 25 per cent. more work than any other roll.  
 BECAUSE the heated air is taken out of the machine.  
 BECAUSE it has the best feeder.  
 BECAUSE it has no tremor.  
 BECAUSE it has the effect of a roll without springs.  
 BECAUSE it can be trammed in a quarter of a minute.  
 BECAUSE you can tram either end of the four rolls.

BECAUSE it runs 25 per cent. lighter than any other roll.  
 BECAUSE all bearings are universal and never get out of line.  
 BECAUSE you can throw the rolls apart from either side.  
 BECAUSE you can set both ends of the roll at the same time with one movement.  
 BECAUSE only one spring is used for both ends of rolls.  
 BECAUSE there is no slip to the differential.  
 BECAUSE no dust escapes from machine, all openings being covered.

Also ask for prices on the only Noiseless Sieve Scalper, the "Allfree" Improved Purifier, "Climax" Bran Dusters, and "Allfree" Flour Packer.

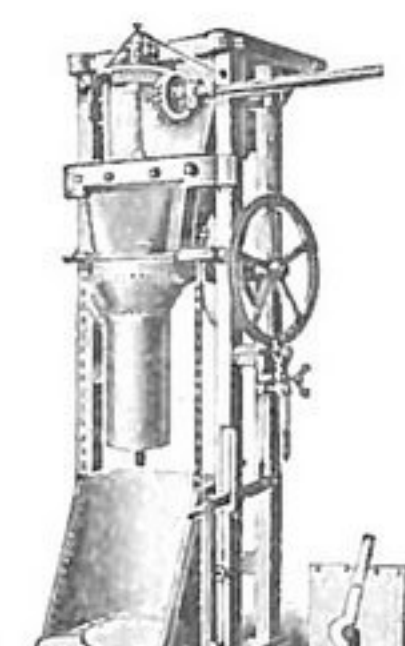
Also ask for prices on "Allfree" Centrifugal Reels, "Success" Bolter, Three Reduction Corn Mills, Latest Improved Designs.



Corn Mill.

Complete Outfits for Flour or Corn Meal Mills of any Capacity.  
**THE J. B. ALLFREE CO., INDIANAPOLIS, IND.**

103 & 105 South Pennsylvania Street.



Flour Packer



# BRAINS, BRAWN AND PLUCK WILL ACCOMPLISH WONDERS, — BUT — THEY DON'T COUNT FOR MUCH IN MILLING WITHOUT CASE MACHINERY.

This fact is so well established that Arguments are not necessary.

## WHERE CAN YOU FIND ITS EQUAL?

*Find a good roller miller who has run the different systems and makes of mills, and ask him which he prefers to run and which will produce the best flour. His answer will be every time*

## "A CASE MILL DOWNS THEM ALL"

Millers who think of putting in a Roller Outfit or of buying more machinery,

## PONDER WELL BEFORE BUYING,

And remember that even if you DO save a few dollars on your contract by buying inferior machinery, WE DON'T CARE WHAT GUARANTEES THEY MAKE, those few dollars saved will lose you as many hundreds before you are through with your BARGAIN, and DON'T FORGET IT. Give us your contract, and if we don't give you a mill that will fill or exceed our guarantee, you needn't pay for it, for

**WE WILL SATISFY YOU EVERY TIME.**

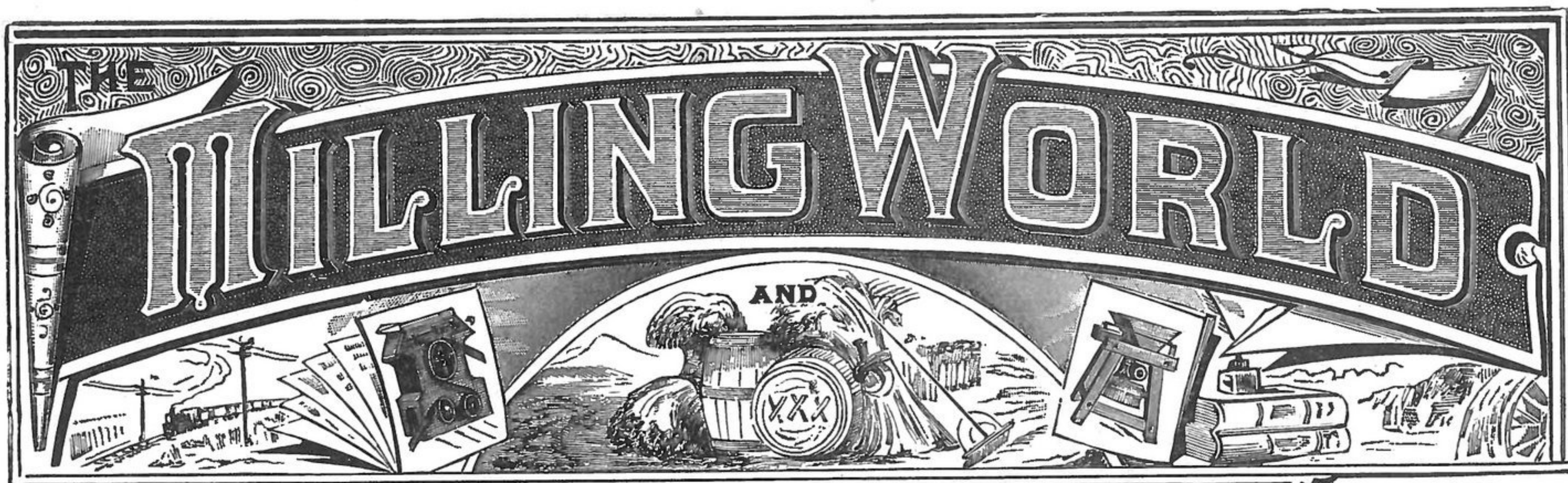
*Mill Supplies of all kinds at Low Prices. Rolls Re-Ground and Re-Corrugated with Accuracy & Dispatch.*

Write Us for Anything you need and We will look after Your Interests.

# THE CASE MFG. CO., COLUMBUS, O.

PLEASE MENTION "THE MILLING WORLD."





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PUBLISHED EVERY MONDAY MORNING.

VOL. XX. No. 25.

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THE latest reports do not indicate any decided improvement in the conditions of spring wheat during the last two weeks. Dakota is still short. Over in Manitoba, without giving any hint of changes upon which they base their increased estimates of yield, they are now claiming that Manitoba and Assiniboia together will yield from 14,000,000 to 16,000,000 bushels of fine wheat. It would be pleasant to believe such an estimate, but it is impossible to believe it in the light of the reports of the past two months.

SOUTH AMERICAN countries, notably Brazil, Uruguay and the Argentine Republic, are making great efforts to attract to their shores and domains the surplus population of Europe. They are inducing foreigners to go to them by paying their passage across the ocean, which may prove in their cases, as it did in the case of Canada, a disastrously expensive way of promoting immigration. We are glad to see certain European elements go to South America rather than come to the United States. In this country we heartily welcome the hardy, active, intelligent, law-abiding Swedes, Norwegians, Scots, Englishmen, Irishmen, Welshmen, Hollanders, Danes, Swiss, Germans and Austro-Hungarians. The South American countries are welcome to welcome the others who emigrate from Europe.

BREADSTUFF exportations for the current fiscal year start in well. During July, the first month of the new fiscal year, the barley exports were \$23,325, against \$16,143 last year; corn \$2,830,571, against \$1,257,452; corn-meal \$80,923, against \$65,082; oats \$40,767, against \$20,104; oatmeal \$42,350, against \$4,511; rye \$97,054, against \$300; wheat 3,241,395 bushels, worth \$2,729,363, against 3,372,623 bushels, worth \$2,900,769; wheat flour 838,798 barrels, worth \$3,962,597, against 810,419 barrels, worth \$3,640,091. The total for July, 1889, is \$9,806,950, against \$7,904,452 last year. The total for the first seven months of 1889 is \$67,036,659, against \$58,396,398 last year. All the conditions favor this country this year, and it seems safe to predict a restoration of the American breadstuff exportations to their highest figures.

THE insincerity of the attacks made by British critics on the quality of American spring wheat, during the past two or three years, is once again demonstrated. When they were confident that Great Britain had at last found, in India, Russia, Argentine Republic and Australia, a sure supply of wheat large enough to render her practically independent of the United States, they at once set about to depreciate American wheat and to vaunt the wheats of those countries. Unfortunately for our "British cousins" the elements went against them in all the countries upon which they were depending, and once more they must come back to the use of the very grain which they were so recently engaged in depreciating. Not only do they want the Dakota and Minnesota wheat; they want it pure and unadulterated. An agent of the British Millers, Mr. Gautier de Ste. Croix, is already located in Duluth, Minnesota, where he will have a permanent office. His plan is to receive the grain from the growers and ship it directly to England, not allowing it to be manipulated in American ports at all. The British millers claim that the grain which they have been buying for

years past has been mixed in the elevators with inferior grades, and they propose to avoid the possibility of mixing by shipping directly from the Yankee farms to the British mills. It is said that Mr. de Ste. Croix has made arrangements with New York and Buffalo shippers and elevators to facilitate his shipments. His idea is that there is a profit in the cost of shipping wheat to the other side over flour, and he produces an array of figures to substantiate his argument.

THE vaunted "British wheat enterprise in India" is damaging British agriculture in every conceivable way. In the first place, that enterprise has forced nearly 2,000,000 acres of land out of cultivation in Great Britain, forcing hundreds of thousands of laborers into the cities to starve on charity, or out of the country to other lands, cutting down prices so that the land remaining in culture is cultivated at a loss, and in other ways seriously disarranging British economies on a large scale. Besides these evils, the imported Indian grain has been the means of introducing into Great Britain a large variety of insect pests, flies, weevils, joint-worms and others, together with noxious weeds, with all of which the British farmer must contend. And, after all, Great Britain has not been able to achieve her independence of the United States in the matter of wheat supply, which has been her aim, openly avowed and steadily followed all these years in all this vaunted "development of India."

THE United States Consul at Glasgow asserts that the poorer people in that city, who abandoned the use of oatmeal for white wheat bread, are being terribly punished for so doing. He asserts that the city is full of deformed people, and his paper on the subject seems to imply that white wheat bread and tea are the causes of the general crippledness in Glasgow. We believe Consul Underwood only imperfectly understands what he is prating about. If oatmeal is so necessary to prevent deformity and general crippledness, and if a lack of it can in a short time cripple a whole city, how does it come that in other cities, in countries where oats is used only for horse food, there is no such general crippledness as Consul Underwood alleges to be caused in Glasgow by the substitution of white wheat bread for unpalatable, irritating and unattractive oatmeal? The oatmeal fad dies hard. The United States is a white-wheat-bread country, if there is such a country on earth, and it remains to be shown and proved that Americans are not as able-bodied, as active, as elastic, as well-formed and as enduring, both mentally and physically, as the people of any other country on earth. The Glasgowegians may be deteriorating into cripples, but it is a wholly gratuitous assumption to charge their deterioration to wheat flour. Bad climate, impure water, foul air, long hours of labor, ill-cooked food, tea, coffee, beer, ale, porter, brown stout, brandy, gin, whiskey, tobacco, snuff and a hundred other things combine to bring about the trouble in Glasgow, and to lump all the evil effects of all these evil causes and dump them on white wheat bread, as on a scapegoat, is a proceeding that ought to excite "the inextinguished laughter of the gods."

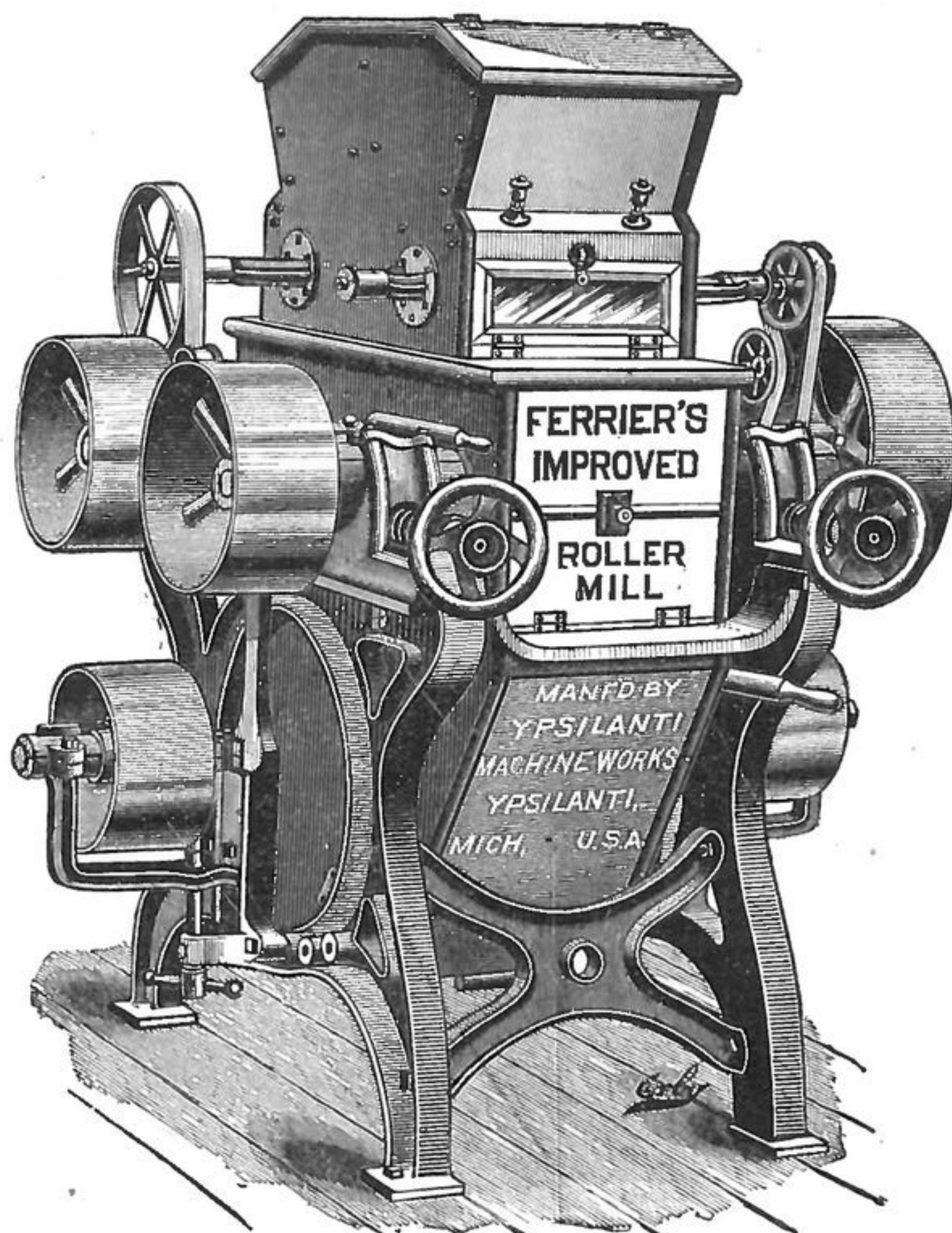


# YPSILANTI MACHINE WORKS, YPSILANTI, MICH.

## MILL BUILDERS

And Manufacturers of

## FLOUR MILL MACHINERY



Sizes of Ferrier's Improved Four-Roller Mills.

6x12	6x15	6x20
9x15	9x18	9x24

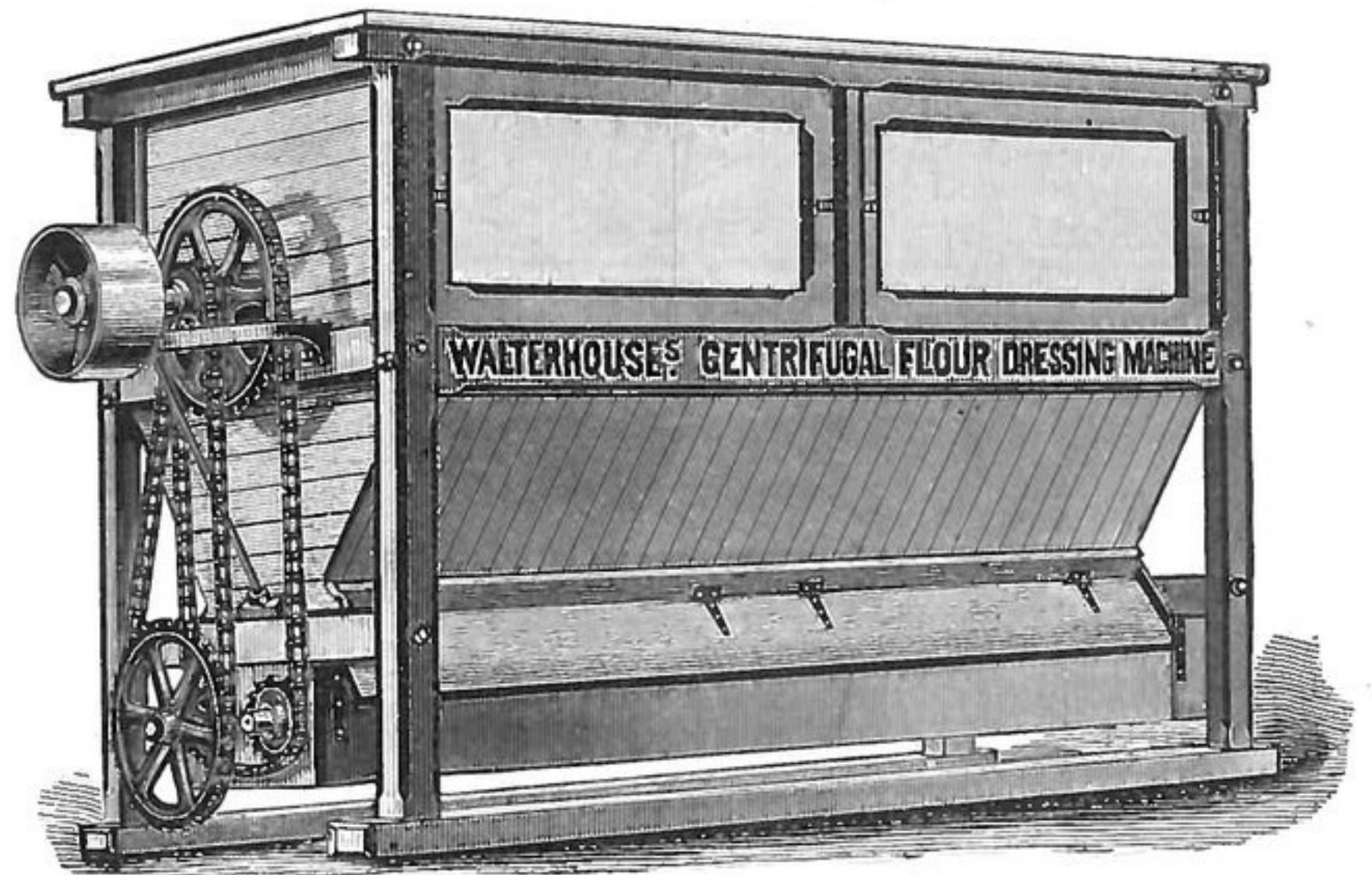
YPSILANTI MACHINE WORKS, YPSILANTI, MICH.

Gentlemen: We have had a line of your "Roller Mills" in use for over two years, and they have given entire satisfaction in every respect. They work like a charm, and their ease of adjustment and solid structure, together with the excellent finish you give them, can but recommend your machines to the milling public.

Yours respectfully, A. R. DICKINSON & CO.

NASHVILLE, TENN., MAY 3, 1889.

Dealers in Bolting Cloth. Walterhouse's Centrifugal; Walterhouse's Slow-Running Flour Dresser with Inside Cylinder; Plain Round Reels; Scalpers, Bolting Screens, Etc., Etc., Etc.



JOHN ORFF, PROPRIETOR OF  
EMPIRE FLOURING MILLS,  
FORT WAYNE, IND., APRIL 10, 1889.

YPSILANTI MACHINE WORKS, YPSILANTI, MICH.

Gentlemen: The Centrifugal Reel bought from you some time ago is doing its work complete in every respect. It does a large amount of work, and does it well. Should we make further changes in bolting, shall use more of them. Wishing you success, we remain,

Respectfully, JOHN ORFF.

TO YPSILANTI MACHINE WORKS.

OFFICE OF LEXINGTON MILL CO.,  
LEXINGTON, MICH., JAN. 22, 1889.

Gents: In reply to yours of June 5th, would say that we are well pleased with our mill. It has more than met our expectations. Although it was feared that the six-inch rolls would not prove a success, we find them to be complete in every respect. We are making as fine a flour as there is made in the state, and we guarantee our patent to be equal to Minnesota Patent. The mill has given us no trouble whatever since we started it, and for plan and workmanship, your Mr. G. Walterhouse deserves great credit. If your friends doubt it would be pleased to have them come and see for themselves.

Yours respectfully, LEXINGTON MILL CO.

# Dawson's Roller Mill

Is acknowledged to be the very best in the market. It has our Patent Automatic Centrifugal feeder, never failing to feed the stock the full length of rolls in an even sheet. It is the Latest and Best feed out, uses less power and is simple in construction. It can be placed on any style of machine with little expense. We use for roll bearings phosphor-bronze metal which will admit rolls being run at any speed without heating and with little friction, and uses little oil. We use the Dawson Corrugation, which is admitted the best in long or short system mills as the action is granulating rather than CUTTING.

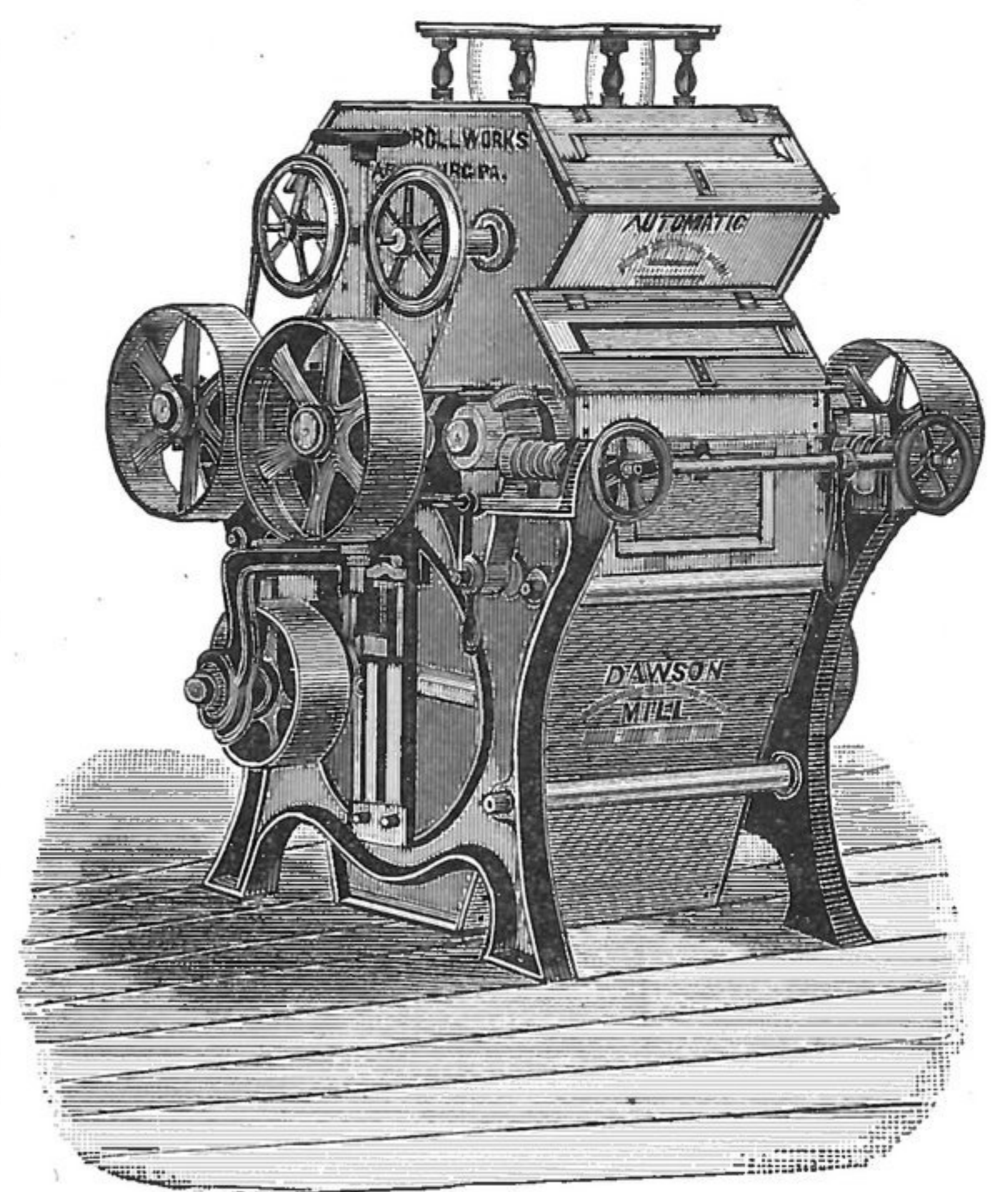
We have a large plant to Re-grind and Re-Corrugate Rolls.

Owing to our late increased facilities and central location we are enabled to ship goods promptly on the shortest notice.

PARTIES CONTEMPLATING REMODELING THEIR MILLS OR BUYING ANY ROLLER MACHINES ARE REQUESTED TO PUT THEMSELVES IN CORRESPONDENCE WITH US.

FOR PRICE LISTS AND CIRCULARS, ADDRESS,

# Dawson Roll Works, Harrisburg, Pa.







PUBLISHED EVERY MONDAY. OFFICES: { Corner Pearl and Seneca Streets,  
Over Bank of Attica.  
McFAUL & NOLAN, - - - PROPRIETORS.  
THOMAS MC FAUL. JAMES NOLAN.

#### SUBSCRIPTION.

In the United States and Canada, postage prepaid, \$1.50 Per Year, in advance; remit by Postal Order, Registered Letter, or New York Exchange. Currency in un-registered letter at sender's risk.  
To all Foreign Countries embraced in the General Postal Union, \$2.25 Per Year, in advance.  
Subscribers can have the mailing address of their paper changed as often as they desire. Send both old and new addresses. Those who fail to receive their papers promptly will please notify at once.

#### ADVERTISING.

Rates for ordinary advertising made known on application.  
Advertisements of Mills for Sale or to Rent; Partners, Help or Situation Wanted, or of a similar character One cent per word each insertion, or where four consecutive insertions are ordered at once, the charge will be Three cents per word. No advertisement taken for less than 25 cents. Cash must accompany all orders for advertisements of this class.  
Orders for new advertisements should reach this office on Friday morning to insure immediate insertion. Changes for current advertisements should be sent so as to reach this office on Saturday morning.

#### EDITOR'S ANNOUNCEMENTS.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.  
Correspondents must give their full name and address, not necessarily for publication, but as a guarantee of good faith.  
This paper has no connection with a millfurnishing house and aims to represent the trade without prejudice, fear or favor.  
Address all communications

**THE MILLING WORLD,**  
BUFFALO, N. Y.

Entered at the Post Office, at Buffalo, N. Y., as mail matter of second-class.

#### SITUATIONS WANTED.

Advertisements under this head, 25 cents each insertion for 25 words, and 1 cent for each additional word. Cash with order. Four consecutive insertions will be given for the price of three.

#### WANTED.

A situation with parties who appreciate good work, with rolls or buhrs, on patents. Have the following recommendation from Miller Bros., Forest Grove, Ore., dated Nov. 10, 1887: "To whom it may concern: This is to certify that Peter Provost has been in our employ as head miller, and has given entire satisfaction. We believe him to be a very competent man, and cheerfully recommend him to the milling public." State wages you wish to pay. Address, PETER PROVOST, Menominee, Mich. 21

#### SPECIAL ADVERTISEMENTS.

Advertisements of Mills for Sale or Rent, Partners Wanted, Machines for Sale or Exchange, etc., etc., cost 1 cent per word, for one insertion, or 3 cents per word for four insertions. No order taken for less than 25 cents for one insertion, or 50 cents for four insertions. Cash must accompany the order. When replies are ordered sent care of this office, 10 cents must be added to pay postage.

#### WANTED.

A miller with some capital to help stock with, to take charge and run my mill. Address LOCK BOX 285, Clearfield, Clearfield county, Pa 17320

#### FOR SALE.

Flour-mill, corn-mill and cotton-gin, in a new growing country, splendid for wheat. Good opening for a mill-man who understands the business. For particulars apply to W. J. MILLER & CO., Ballinger, Texas. 2023

#### FOR SALE.

Several good second-hand and new turbines of various styles. Second-hand price list and descriptive matter and prices of our new machines sent free. Every one interested in the shortest route to successful milling on rolls or in grinding corn and feed with the least expense of power, should address us before buying.

FLENNIKEN TURBINE CO.,  
Dubuque, Iowa.

8tf

#### MILL MACHINERY FOR SALE.

One No. 0 Standard Combined Separator, Smutter and Brush Machine; new, best make.  
One 20-Inch Under-Runner Portable Mill, French Buhr Stone, capacity 10 to 12 bushels per hour; new, best make.  
One 14-Inch Vertical Feed Mill; best make, new, a bargain.  
One No. 6 Dustless Separator; new, a bargain.  
One No. 1 Full Rigged Combined Dustless Separator; new, a bargain.  
Four Corn Cob Crushers, right or left hand, driven from above or below, best make; capacity 40 to 60 bushels per hour.  
Three No. 1 Corn Shellers, capacity 200 to 300 bushels per hour; new.  
One No. 2 Purifier. New. Best make. A bargain.  
For particulars address, FRANK SMITH, care of THE MILLING WORLD, Buffalo, N. Y. 5tf

#### WANTED.

A good buhr miller, that thoroughly understands his business, to run a custom mill. Must be a sober, industrious man. State age, how long at the business, whether married or not, and best terms for steady employment. Give references. Address BEACH, BROWN & CO., Montrose, Pa. 2223

CANADA boasts that in certain lines she exports more than the United States. Canada would have more cause for boasting if she could increase her population so that she would consume more and export less of her limited production.

THE fire losses in the United States and Canada in July amounted to \$11,020,500. The milling and allied industries contributed \$180,000. The losses for the first seven months of 1889 were \$75,306,500, against \$77,789,320 in 1888 and \$76,928,100 in 1887.

In a large number of letters received from farmers in the winter and spring wheat sections there is not one that mentions the yield of 10, or 11, or 12 bushels to the acre, which is semi-officially published as the "average yield" in the United States. THE MILLING WORLD does not believe that it is the proper thing to publish the "average" as it is now obtained. The easy method of dividing the alleged total yield by the alleged total acreage gives a result that is practically worthless, for three very good reasons: 1. In no season has the actual yield ever been accurately determined. Even the "official" reports are admittedly tainted by "estimates." 2. In no season has the exact acreage been determined. Here again come in the "estimates" to taint the figures. 3. In all seasons there are thousands of acres sown to wheat which are not cut at all, owing to injury by drouth, flood, frost, winds, intense heat, hail, bugs, worms, flies, grasshoppers, rust, smut and other things. Out of three so glaring inaccuracies how is it possible to obtain an accurate average? Our Manitoba neighbors maintain sturdily that their "average" is from 30 to 35 bushels to the acre, although last year, from over 500,000 acres they reaped only 2,000,000 or 3,000,000 bushels of wheat. Their method of averaging stands at one extreme, that of gross exaggeration, while the method practiced in the United States stands at the other extreme, that of gross minimization. Between the two extremes there is a golden mean, yet to be discovered, which shall more nearly do justice to all concerned than the present method does.

SECRETARY BARRY, of the Millers' National Association, who is charged with the authorship of a recent wholly uncalled-for attack on THE MILLING WORLD, the St. Louis "Miller" and the "American Miller," should lose no time in promptly disproving that charge. Our esteemed Chicago cotemporary, the "American Miller," makes the charge openly and unqualifiedly. If it be a false charge, Mr. Barry should at once deny it. If it be a true charge, Mr. Barry is not a fit man to serve as secretary. If he be a man so mean, so narrow, so bigoted, so puerile, as to go out of his way to make a wanton and uncalled-for attack on the business of any office in which he has no interest, as he did if he is the author of the attack referred to, he is a most diminutive specimen of man and will surely lead the association into new and deeper depths of meanness, puerility, debasement and degradation. So long as we supposed the attack to be the work of Editor Cawker, of "The United States Miller and The Milling Engineer," we did not consider it worth notice. If Mr. Barry be the author, the attack takes a new meaning, and if he acknowledge by silence the truth of our Chicago cotemporary's accusation, we shall endeavor to portray him to the life. What say you, Mr. Barry? Are you "Arizona Kicker, jr.," or are you maligned and libeled in the accusation of "The American Miller"? You can not maintain a "dignified silence" on this subject. If you really left your desk in the Milwaukee machinery house to attack us through the columns of the alleged Milwaukee milling paper, we have the right to know it. If you did not do so, you have the right to acquit yourself of the charge made against you. What say you?

## M-I-L-L-E-R-S

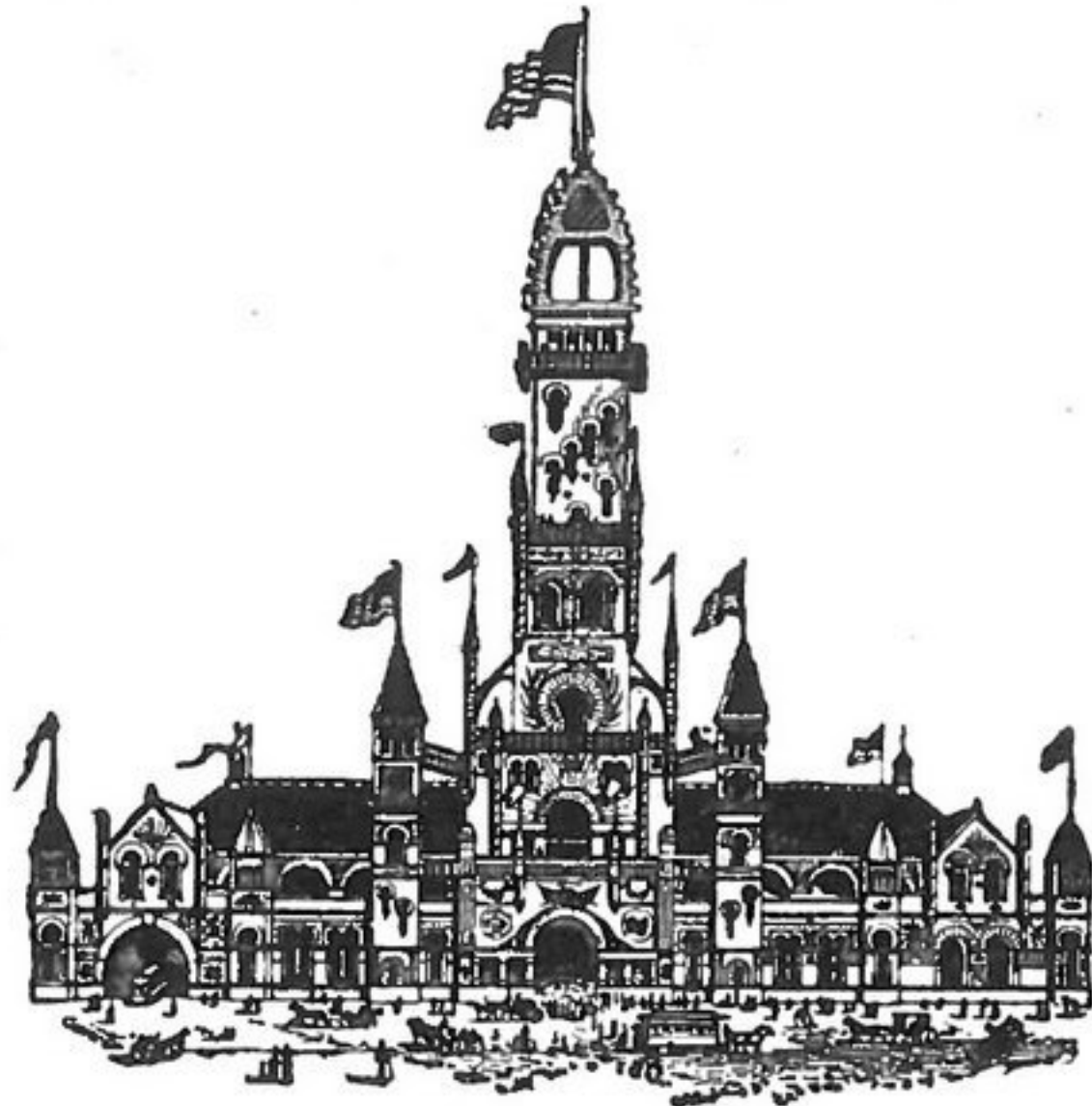
Wanting Bolting Cloths should write for discounts on same before purchasing elsewhere to

**SAMUEL CAREY,**  
17 Broadway, New York.



**THE SIOUX CITY CORN PALACE.**

The Third Annual Corn Palace and Harvest Festival will be held in Sioux City, Sept. 23 to Oct. 5, 1889. The two preceding palaces have gained a wide reputation, and many who have seen this marvelous blending of nature's silent work and the handicraft of man have named it "The Eighth Wonder of the World." It is only those who have seen the Corn Palace who can appreciate its beauties, and few have the power to describe it. No cut or picture can give an adequate idea of its wonders. The world has heard of its new effects: the blending of greens and golds, of yellows and the unnamable, exquisite tints which the earth, the sun and the rain have given our native grains and grasses, of lights and shades of which the artist never before dreamed, and it is hoped that thousands more will avail themselves of the opportunity to see it this year. It is believed that those who do will feel that they have seen the sight of a life-time. The Corn Palace of 1889 will be different from either of the others. Experience has done much to perfect its plans of decoration. In length it will be 240 feet; width 120 feet; it will have a central tower 200 feet in height. It contains a double auditorium 232 feet in length with an immense music stand covered by a sounding board, which insures the best acoustic effects. The music this year will be furnished by the famous Seventy-first Regiment Band, of New York. Ample facilities are provided for county and state exhibits, and in this respect the Corn Palace will contain more of value and of interest than any agricultural fair ever held. Contributions are invited from all over the



THE SIOUX CITY CORN PALACE.

world, the prizes being particularly attractive and definite. Sioux City is well provided with accommodations for the throngs. She has excellent, commodious hotels and many sights of interest. No money or pains will be spared in providing entertainment for the guests, and one day will vie with another in its programme of concerts, parades, celebrations and illuminations. Cheap excursion rates are offered on all railroads; in many instances special trains will be run. Communications in regard to the Corn Palace should be addressed to James V. Mahoney, secretary, Sioux City, Ia.

**THE PURIFICATION OF MIDLINGS.**

Next in importance to good bolting arrangements in a flour-mill is a good arrangement for purifying the middlings. The question as to what kind of a machine, or whose make, to use is not now so much considered as formerly, for the reason that the requirements of such machines are better understood, and therefore the makers, or nearly all of them, get out good machines that do very good work. The principal point to be determined in selecting purifiers is that, as with all other machines that go into a mill, they should be well and durably made, the frames being of hard wood well put together. The iron work should all be neat and well fitted, bearing the stamp of mechanical skill, and an honest effort to do an acceptable job. It is perhaps the intention of all makers of such machines and all other mill machinery to have the iron work well fitted and moderately well finished; but they all do not. All shops are not equally well provided with tools for doing the best iron work, nor do I think all owners of such shops are equally desirous of doing

the very best, some going on the theory that the cheapest way to do it is the best, that is, to hire the cheapest men to work with the poorest tools. Badly fitted and finished iron work is a great vexation, and no miller is consulting his own interests when he patronizes houses that do not get their work out in strictly first-class shape.

A second essential in a purifier is to have good separating qualities. It should have good lungs, so to speak, and have them well distributed. It is not enough to have a fan simply and a hole somewhere in the upper part of the machine to suck through, because with such an arrangement it will be found next to impossible to draw the air evenly through the sieve. The openings between the cloth and the fan should be numerous and distributed along the machine in such a manner as to enable the operator of the machine to regulate the currents of air equally or unequally, as occasion may require. All purifying machines should also be constructed with the view of letting in abundance of air under the sieve; not all in one place, but along the entire length of the machine on both sides. With well distributed apertures for drawing the air up through the cloth and openings to let it in below the cloth, a machine should in that respect be almost perfect, and without good air-currents no kind of a purifier can be considered a positive success, as more depends on the air than on any other principle involved in the purifying process.

A purifier ought also to have a good and very regular feeding-device, which is especially important on soft stock. The material should drop on the cloth in a regular and uniform stream, reaching clear across it, and the sieve should be so suspended in the machine as to allow it to be adjusted in such a manner as to keep the stream of middlings spread over it in an even regular manner the whole length, or from the time they strike the cloth at the head of the machine until the tail is reached. It is impossible to make a thorough job of purifying middlings if they are allowed to pile up in bunches and to travel from one side to the other of the sieve, and all machines should be constructed in a way to prevent that; or, rather, machines with provision for that kind of a regulation should be selected.

The location of a machine in reference to dirt or dirty air is also an important consideration, if a mill is of a generally dirty character, which it never ought to be, but always is where mills and elevators are combined substantially in one building, as we often find them, in the west especially. Either way, the upper part of the mill especially is always more or less filthy from the oats and corn dust caused by the handling of those grains in the elevator part of the mill, and consequently no decent place can be found to locate a purifier without partitioning off a separate room for it, which ought always to be done in all such mills. The purifier should have a separate and independent room made dust-tight, and if no dust-catchers are used, the dust from the machine or machines should be blown outside the room through a dust-tight spout into a dust-room or wherever else may be desired. A purifier should never be in communication with its own dust and dirt, any more than with any other kind or from any other source. I have seen a purifier constantly covered on top and along the sides with its own dust, which has been blown into an imperfect dust-house, which permitted it to float out into the mill again and settle down on every thing, including the purifiers. Under such circumstances, the best machine ever built can not be expected to do justice to the work and clean the middlings in a thorough manner.

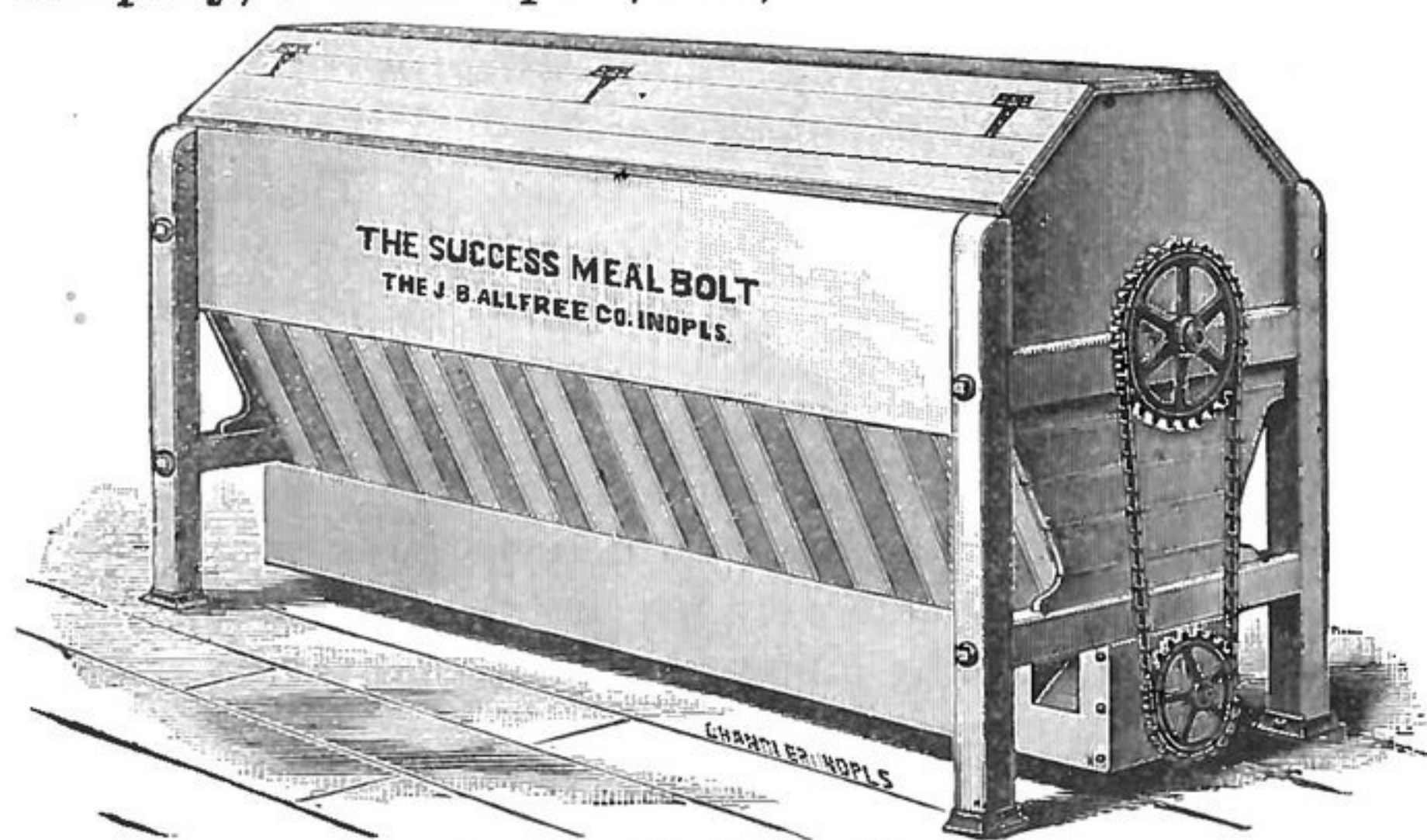
As all the practical men know, coarse middlings are very easily taken care of and purified; a very good job of purifying coarse middlings can be done with air alone, without the use of a cloth. A device with a series of tumbling boards which allow the middlings to run by their own gravity and drop from one to the other in thin sheets, through which a current of air is drawn, is all that need be used for the purpose. The bran particles should be well separated from the middlings by scalping or otherwise, before being sent to these strong air purifiers, usually called aspirators. All flour should also be dusted out of them. As to that matter, though,



the flour should be thoroughly dusted out of all kinds of middlings before they are sent to any kind of a purifier. Fine and soft middlings must be handled easier and with more care, and always over cloth, as in sieve machines. In spite of all that may be done, middlings will wear while being handled and therefore manufacture a fine flour-dust all the time, most of which is liable to be wasted unless handled very carefully. As strong currents of air can not be used on fine middlings as on coarse, and for that reason the current-regulating devices of a purifier should be so constructed that a lighter draft can be used at the head and a heavier one at the tail. The bulk of whatever flour there may be in the middlings will find its way through the cloth at the head and be saved if the draft of air be not too strong, and other impurities which the fan is expected to take out can be caught as the material nears the tail of the machine by increasing the air-draft. Soft second middlings should be cleaned on a separate machine, which can be regulated to suit that kind of stock alone. The cloth has to be fine and pretty abundant, and the cloth depended upon, rather more than the air, to do the work.—*R. James Abernathy in "The Mechanical News."*

#### THE "SUCCESS" CORN MEAL BOLT.

Corn-meal millers will inspect with interest and profit the corn-meal bolt illustrated in the accompanying engraving. It is the "Success" corn-meal bolt, built by the J. B. Allfree Company, of Indianapolis, Ind., from whom all information



THE "SUCCESS" CORN MEAL BOLT.

concerning sizes and prices may be obtained. It is a standard machine, plain, durable, simple and efficient. It contains a hexagon reel, iron shaft, cast-iron spiders, tight head and hard-wood ribs. The dimensions of the No 1 machine are as follows: Length over all, 7 feet 9 inches; height over all, 3 feet 10 inches; length of reel, 6 feet; diameter of reel, 24 inches. Address the makers for further particulars.

#### POINTS IN MILLING.

MILLING systems and machinery are occupying a prominent place at the Paris Exposition, although visitors specially interested in milling complain that the display is far from being what it should be in this important line. In the Sixth Group, Class 50, styled "Materials and Processes for Agricultural Works and Alimentary Industries," there are about 160 exhibits. They include 104 from France, 9 from French colonies, 1 from Germany, 4 from Great Britain, 14 from Switzerland, 9 from Belgium, 4 from Spain, less than a score from other nations, and only 7 from the United States of America. Some of the milling machines and systems shown by the French are very novel. J. Schweitzer, of St. Denis, France, shows his "rational grinding system" in full operation. His plant includes 10 machines on 2 floors, and occupying a space of about 200 square feet, and grinding 40 barrels of flour in 24 hours. The mill is driven by belt, transmitting 10-i-h-p., and requires only one man and a boy to look after it. This system is especially adapted for small mills and is simplicity itself. The dirty wheat passes from the bin in the first place to an inclined sieve, which has a sidewise shaking movement, where it is cleansed of stones, clay, dust and smut-balls, thence to a "combined cleanser," which consists of a trieur cylinder, aspirating sieve and brush in one frame. This completes the first process of

grain-cleaning, and the cleaned wheat is now subjected to a second cleaning process, which consists of a splitting-machine for splitting and loosening the germ, and a brush for separating the loosened germ and black flour from the wheat. The "splitter" consists of two chilled discs of inverted conical shape, turning in opposite directions. These two discs are grooved in such a way as to split the wheat only in a longitudinal direction. The lower disc has grooves in the form of an inclined plane, terminating in a sharp edge. These grooves, where the grains enter one by one, are shallower as the grain moves toward the outer edge. The berry moves longitudinally in the groove, and at a certain point it is caught by the top disc and rolled up the inclined plane lengthwise. Then, as the grain is pressed against the sharp edge, it is split in two and dropped into the delivery spout. Every grain is split longitudinally, the rolling motion making any other splitting impossible. The split wheat is next subjected to the action of a horizontal brush, which acts strongly enough just to disengage the black flour and germ, which are then extracted by means of a sieve. The wheat germs, isolated and pure, are transformed, after extracting the water and oil they contain, into an alimentary powder, which has received the name of "Fromentine." The wheat oil extrated from the germ is called "Bledoline" and is used by chemists as a purgative. Mr. Schweitzer possesses the sole right for the manufacture of these two products in France. The clean split wheat now comes into the mill proper and passes at once to the reduction mills. These mills are placed one over the other in a set of three and are combined in one machine with two scalping-sieves to economize space and to reduce the insurance, the three reducers and two sieves counting as one machine in France, being built in one frame. These reducing mills consist of two horizontal discs, the top one fixed and the lower one turning on a vertical shaft. They can be set while in motion, and by an ingenious arrangement the pull of the belt comes in the center of the toe, which is about 15 inches long and completely submerged in oil, so that the wear of the toe is reduced to a minimum, and whatever wear there may be is always parallel to the axis of the shaft. The discs are grooved in the same way as the splitter, on the inclined-plane system, and are so arranged that when the products have been submitted to the action of the discs they fall into a counter-groove leading to the outlet. The direction of the revolving disc is such that the sharp edges never meet. In fact, one can set the mill up when running without harming the faces, as the top and bottom disc simply wedge themselves one into the other. The action in this machine, as in the splitter, is a rolling one, and the bran is simply unrolled, as it were, from the other products, without either being cut or broken. From this machine the chop passes on to a scalping-sieve, which furnishes a certain quantity of semolina, middlings and straight run flour. These sieves have a to and fro motion given by an eccentric at the side, as in the case of the stoning-machine, and this movement continually brings to the surface the lighter products and leaves only the heaviest products for the meshes of the sieve to deal with. M. Schweitzer claims for these machines that he is able to do the same work with twenty times less sieving surface than the old scalp-reels and do the work more effectually.

ROSE BROTHERS, of Poissy, France, show a mill in which are presented two different systems at work side by side, one consisting of a complete roller plant, and the other consisting of granulators and cylinders combined; the two systems they claim to be giving absolutely identical results. Messrs. Rose also employ a splitter in their system, which consists of four breaks only, as they put it, but is really equivalent to five breaks, with the wheat-splitter. This machine, which is like the Higginbottom disc-mill, is vertical and is fed in the center; the work done does not appear to be equal to that by the Schweitzer machine, which is horizontal, the breaking down being much more severe. There is a very neat adjustment of the two discs in this machine. Instead of approaching the fixed disc by means of one central screw, the movement is effected by three screws placed outside the



frame. These three screws are connected by means of chain-wheels and an endless steel link-chain, so that a handle on one of them will impart exactly the same amount of movement to each of the other two. In the combined system there are only two breaks, the splitter and the granulator, the middlings being sent to rolls in the ordinary way. In Messrs. Rose Bros' granulating system the wheat first passes through the splitter, the product of which passes to a break-flour reel, the tails of which, except the black flour and a certain percentage of germ, delivered separately, go to a granulator, also a disc-mill, which delivers its product to a straight-grade-flour reel, from which the middlings pass to a purifier and the chop to a bran-detacher, whose product is dusted on a reel, the product of which is flour, sharps and bran delivered separately. The purified middlings are reduced on a pair of smooth rolls, which deliver their product to a middlings reel, the middlings therefrom going to a purifier for further reduction to flour. The novel feature in the roller-mill of Rose Bros. is an arrangement by which the rolls can be set both vertically and horizontally, and this without affecting the rigidity of the frame. Of two samples shown, the middlings from the granulator system appeared to be rather whiter than on the complete roller system, and, being more even in size and rounder, would be easier to purify. The bran was large and well cleaned on both systems. One of the claimed advantages of these granulators is their capacity for treating equally well all sorts and conditions of wheat—dry, soft and damp, but very dry or very soft wheats would not give such good results as a wheat of medium hardness, on this class of machine. On the horizontal machine the unrolling action on the skins of the wheat berry would be in favor of the softer wheats.

#### DAKOTAN WHEAT YIELDS SURPRISING.

Says the Minneapolis, Minn., "Daily Market Record" of August 9th: The threshing-machine is moving northward and brings with it results of yield that are often surprising. Measurements of 30 bushels an acre and sometimes 40 bushels are not uncommon. Fields whose stand of straw was believed too short and thin to pay for cutting have in some instances yielded 15 bushels per acre of the very finest wheat. There is considerable smut found in some sections where the yield and quality are otherwise excellent. In the north, where fields were wind-blown in the spring and whose wheat started unevenly, it has ripened unevenly. To save that early ripened, the late grain is too green to cut. On that account there will be some grain of imperfect quality. More imperfection was threatened when the wet weather set in this week. A favorable change has removed that probable result, and conditions favoring a large production of fine quality now exist and have made good results almost a certainty, especially as considerable is now in stack.

#### COTEMPORARY COMMENT.

Harvesting is general in North Dakota, and a few lots have been threshed, in about all cases yielding better than had been expected. That has proved to be the case in all sections. Fields with short straw that were expected to yield 10 to 12 bushels have turned out 18 and 20. If the weather next week turns out to be as good as the last week, the wheat in the southern half of Minnesota and Dakota will be mostly in stack, and in the north will be about all cut. No sort of weather now can prevent a good yield, and only heavy rains can hurt the quality. A week more will see the grain in the south pretty secure and two weeks will secure the bulk of it in the north. It is now pretty certain that the crop of wheat in Minnesota and the Dakotas will thresh out 90,000,000 bushels.—*Minneapolis "Market Record," August 10.*

A purifying, separating and aspirating machine of remarkable simplicity and capacity has recently been introduced by some California millers and is finding its way eastward. About all there is to it is a feed-roll and small cylinder enclosed in a plain wooden box. The stock as it falls from the feed-roll meets the cylinder, which is revolving at sufficiently high speed to carry a "layer" of air with it. This air-

current seizes the material and whirls it around the outside of the cylinder, delivering the light, fluffy stock at one side and the purified middlings at the other, and performing a complete separation. As will be surmised, it occupies very little space and requires but a little power to run it. It has been at work on germ middlings in a few mills to the admiration and satisfaction of the millers, we are informed, and does away entirely with dust-collectors.—*Kansas City "Modern Miller."*

The past season has been a singularly unprofitable one to millers, and the beauty of the situation at the wind-up has been light stocks and the stubbornness of holders, which prevented them from going long on a declining market. They have now the earth to choose from, and the fullness of it offers them wide and choice selection. There are no corners afloat to grind them, and they can grind and wait, and find a weighty grist at home while the world wants their product.—*Baltimore "Journal of Commerce."*

#### DANGEROUS DEMAGOGUES.

A. B. SALOM.

Repeatedly the writer has pointed out the great danger to which the cause of labor is subjected under the unwise leadership of demagogues. Protests have been made. The most insane utterances of the demagogues referred to have found defenders, applauders and apologists. The writer has been accused of undue sympathy with the capitalist and of contempt for the laborer. Of course the accusation is about as far from the truth as it is possible to go, and of course it is about as close to the truth as the average ranting demagogue ever cares to go. The moment a writer objects to riot, arson, bloodshed and anarchy as weapons for labor to use, that moment he parts company with the true demagogue. Notwithstanding that discreditable fact, it is well to call attention to the balderdash and quackery, palmed off upon laboring men by loud-muthed orators at \$100 or \$200 a night, which is offered as a cure for all the ills to which laborers are heirs. Look at the ideas thus dearly paid for by laborers in one or two cases.

First, look at the so-called land-tax, or single-tax, demagogism sold by one voluble demagogue to the body of labor at fancy prices. Here is a man with a head full of ideas that were exploded centuries ago, and with an endless flow of words, words, words, reaping a large fortune in a few years from the poor men whose woes, real and imaginary, he proposes to cure by inducing the people to authorize the government, of their own making, to confiscate the property of the land, also of their own making! Stripped of all sophistry, that is his bare idea. What have laboring men received from this demagogue in return for the fortune they have poured into his pocket? Has he given them one solitary atom of benefit? Has he cleared the sky of discussion, or has he added clouds to those already there? Has he not taught dangerous, revolutionary, destructive ideas? He has led his followers into deeper darkness. He has held out false hopes. He has advocated criminal methods and instrumentalities. In short, he has been simply and only a dangerous demagogue, and he has gained by his demagogism the wealth he has pretended to look upon as criminal.

Another dangerous demagogue has befooled the laborers by prating of a twofold method of righting the wrongs of labor. This demagogue, a religious teacher, proposes on the one hand a confiscation of land and property by the government, without compensation to the present owners, and on the other hand the elevation of men and women by religion to fit them for the enjoyment of wealth which they have never earned or amassed, and which he proposes to thrust upon them by governmental aid! Appropriately, this religious teacher mingles with this doubly paradoxical monstrosity the single-tax foolery of the first demagogue referred to. The result is an idea, or a confusion of ideas and morals, a mixture of criminal means to accomplish supposed righteous ends, that, instead of being beneficial to the laborers who pay the reverend quack for prating to them, must inevitably harm them. He may be insane. He may be imbecile. He certainly is dangerous.



A third picturesque and grotesque demagogue of the wanton and dangerous sort is another clergyman, whose name has been mentioned in these articles. It is the Rev. Hugh O. Pentecost, to some of whose insane balderdash attention has already been called. Recently he was engaged in misleading an audience of laborers, and among other astounding things which he said are the following choice bits: 1. He wanted agitation to go on until there is not a single millionaire left. 2. There is wealth enough in the country to give every man, woman and child \$5,000 a year. These are modest propositions! How will this reverend demagogue dispose of the uncomfortable millionaires? Does his particular stripe of religion suggest killing them or robbing them? Either mode of "agitation" would be effective, beyond doubt, and he should tell his hearers just which method he favors. Look next at his figures. He gives \$5,000 a year to each man, woman and child by some mysterious hocus-pocus. There are about 65,000,000 of us in the United States. At the average rate of \$5,000 the Pentecostal distribution of funds would call for \$325,000,000,000 a year! The total wealth of the country is only about \$60,000,000,000, and yet this demagogue proposes to divide over five times that amount yearly among the inhabitants!

Again and again it should be asked, what is to be gained by such utterances to laborers? Do the laborers know that the Rev. Hugh O. Pentecost is deceiving them? Or do they actually go away from one of his insane meetings believing that, under a fair division of earthly things, they are each entitled to \$5,000 a year, and that the millionaires, whom he proposes to abolish, either by robbery or murder, or both, are in some mysterious way keeping them from receiving their just dues? If they are intelligent enough to perceive the deception, or humorous enough to ridicule his absurdity, no harm will be done, but, unfortunately, many of them believe the wildest assertions of these demagogues and are ready to proceed to extremities, because their belief inflames them with anger and hatred towards the capitalists. Thus it is undeniable that these propagators of false theories, these advocates of confiscation, these inciters to the robbery and the murder of wealthy men, these mixers of alleged religion with undoubtedly criminal methods of agitation, are dangerous demagogues of the most dangerous character. Not one of them is or can be a true friend to labor or to laborers. Not one of them is or has been a laborer. They are simply leeches upon the body of labor, upon whose blood they fatten, and whose progress they check by their deceit, their quackery and their wantonly false and dangerous teachings.

#### A GERMAN VIEW OF THE BUHR.

German millers are conservative. One of them, writing in the Berlin "Mueller" on the buhr, says: Millstones will always hold their own in the mill, and in many ways do better work than roller-mills. Hence the latter are only to be found in our modern flour factories. A miller gifted with gumption will use both rollers and millstones and will put each to the right kind of work. But if a miller can not afford a roller-mill, then he must make up his mind to get along with millstones. To turn out really finished work with millstones demands painful toil, but the miller who is not afraid of the work involved need not fear competition. Unfortunately in many stone mills too little regard is paid to the quality of stones, their dressing and their keep, and badly kept stones will give a poor product. The customers complain of the flour, and the miller, because he is unable to diagnose the true cause of the mischief, allows himself to be talked into the purchase of a roller-mill. The rollers arrive and are at once fixed up by some mill-wright, who has in all likelihood never set eyes on a roller-mill of that kind in his life. Then the miller sets to work to grind, and samples of the new gristing are soon in the baker's hand, but, alas! the flour is just as bad as before. In sheer despair the miller sends for a workman from the factory which supplied his roller-mill, and this gentleman makes it clear to the miller that if he would compete with large mills, a purifier and a re-dresser are absolutely necessary. Only too often

new machinery is erected without any system, and consequently without attaining the desired result. If a miller thinks he ought to improve his plant, let him begin in every case on the purifying machinery before he even thinks of roller-mills. He should keep well in mind the fact that the purchase of new machinery frequently results in a mere increase of dead capital, and that such machinery will by no means give him the power of making good flour out of poorer and therefore cheaper wheat.

The stone-miller of to-day, who works on good and well cleaned wheat with good stones, well dressed and well kept, will always be able to hold his own against his competitors. A great deal lies, no doubt, in the choice of a pair of millstones. The same pair will not be suitable for every kind of work, it will not be enough to order of the nearest millstone builder a pair of stones for this or that purpose without first finding out whether he is in position to supply what is required. Many a miller who works with only one pair of stones will, in ordering a new pair, insist on that pair being able to treat any material that may turn up. This is of course an absurdity, because to every pair of stones must be assigned a special kind of work. Many millstone builders are wont to let into a stone sections of hard, coarse texture; such stones ought not to be set up. Before any stone is erected care should be used to see that its sections are of equal density, nor should it receive its dress until it has been made quite plane or straight; unless this be done, it will work badly and soon be unfit for use. It is a great mistake to look too closely at the price of millstones; the extra cost of a really good pair will be recouped many times over. Stone flour will not fall short of roller flour, if only a good purifier and the other necessary accessory machines are used. All the miller has to do is keep his stones in good order and understand how to use them.

READ the new advertisement of the H. C. McCool Manufacturing Company, of Perrysville, Ohio, which appears elsewhere in this number of THE MILLING WORLD. The specialty they advertise is the "Monarch" corn and cob crusher, a machine that will attract the attention of thousands of our readers. Read what they say in their announcement, and address them for their latest price-lists and illustrated circulars.

CONCERNING the wheat situation in Austro-Hungary a Budapest grain authority writes under date of July 27: Threshing reveals that the deficiency amounts to at least 55 per cent. compared with last year. In many cases the yield will not more than equal the seed planted. Our market is very excited quite independently of reports from foreign countries. The crop is a very poor one, and we have not grown enough this season for our own consumption.

## SPECIAL NOTICES.

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**STEEL-WIRE TIRED FLY-WHEELS.**—MM. Mannesmann, of Remscheid, Westphalia, Germany, are manufacturing fly-wheels capable of double and even treble the speed of fly-wheels made of cast-iron, the resistance of which is generally limited to a speed of 40 meters, or about 129 feet, per second for the rim of the wheel. They have succeeded in obtaining fly-wheels which are capable of acquiring three times the speed of ordinary fly-wheels, by constructing the nave and the spokes of iron or steel and making a rim entirely of steel wire wound round and round itself a great many times.

## GENERAL NOTES.

The total area in square miles of the British Empire is 9,416,032. Of this 121,248 miles are in Europe, 1,706,569 in Asia, 768,841 in Africa, 3,172,040 in Australasia, 437 in Oceania, 3,523,489 in North America, 7,913 in the West Indies, and 115,500 in South America. The total population is 312,940,710, of which 261,314,826 are in Asia, and 37,781,714 in Europe. The total public revenue is \$1,033,040,325, and the total public expenditure \$952,719,870 per annum. The aggregate value of the imports is \$2,971,948,175, and of the exports \$2,582,008,400 or a total trade yearly of the enormous amount of \$5,553,956,575. The public debts aggregate \$5,616,950,355 or a trifle more than the total of one year's trade.

### THE GOVERNMENT AUGUST CROP REPORT.

Following is a synopsis of the government crop report for August: The Department makes the condition of corn 94.8; spring wheat 81.2; spring rye 95.4; oats 92.3; barley 90.6; buckwheat 95.2; potatoes 94.3; hay 94.5, and tobacco 84.4. Corn has made an improvement during the past month of  $4\frac{1}{2}$  points and is now less than 1 point lower than on the same date last year. The August return of condition has not stood more than 1 point higher during the past nine years, and the present return has been equaled but three times during that period. The improvement is quite generally distributed throughout the country, following the favorable growing weather and sufficient rain-fall. In a few States, especially along the Atlantic coast, condition has been somewhat reduced by excessive rain-fall and local floods and overflows, while in many other districts where improvement is noted similar causes have prevented full cultivation and thus lowered what might otherwise have been nearly perfect conditions. In Ohio, Michigan and Indiana the results are early and favorable, meteorological conditions are being overcome and the crop prospect is rapidly improving. The drouth which in portions of the Northwest threatened the crop has been broken by seasonable rains, and the present returns show high condition in that section. The

figures for the principal corn States are: Ohio and Indiana 87; Illinois 90; Iowa 100; Missouri 96; Kansas 102; Nebraska 101; Texas 99, and Kentucky 97. The general average for the seven surplus States is 95, against 90 last month and 96 for August, 1888.

Spring wheat has suffered a further falling off during the month, the decline amounting to nearly 3 points. Condition is now nearly 3 points higher than in 1887 and 1 above that of 1886. With these exceptions, it is the lowest since the very small crop of 1881. Minnesota crops show some improvements since last report, but in Dakota there is a further decline, from the same causes noted last month. Dakota is now the largest spring-wheat State, and very low condition there reduces the general average. In the rest of the spring-wheat district, condition is generally good, perhaps above the average for a recent series of years. Averages in the principal States are: Wisconsin 90; Minnesota 93; Iowa 94; Nebraska 91; Dakota 57, and Washington 75. The quality of the crop will be better than usual, especially in the extreme Northwest. Rye and barley each decline 1 point, the falling off being mainly in Nebraska and Dakota. The condition of oats, while 2 points lower than reported last month, is higher than August of any year since 1885. In many sections the crop has suffered from heavy winds and rains about harvest time, and the next report may show damage from this cause not yet appreciated.

### MILLING PATENTS.

Among the patents granted August 6, 1889, are the following:

Wm. F. Boehning, Minneapolis, Minn., No. 408,285, a dust-collector.

Jas. F. Winchell, Springfield, Ohio, No. 408,448, a crushing and grinding mill, assigned to the Foos Mfg. Co., same place.

August H. W. Droste, St. Charles, Mo., No. 408,467, a grain weighing and registering machine.

Adolf Wassmund, Cologne, Minn., No. 408,556, a grain-heater.

Austin Herr, Washington, D. C., No. 408,618, a method of separating garlic from wheat, and No. 408,619, a machine for separating garlic from wheat.

We see no reason to change the judgment given last week, that barring an early frost the corn crop of 1889 will be good, but more likely to fall below 1,925,000,000 than to exceed it. . . . At the spring-wheat harvest in 1887 the condition was 82, slightly above the present condition, and the yield was 11.42 bushels per acre; on an acreage of 13,780,000 this year this would indicate a crop of 157,500,000 bushels. Of winter wheat there is little to be said. The weather has been more favorable during the past week, and threshing and marketing are in a fair way to be resumed. Oats have been injured some by the heavy rains which followed the cutting, and a good deal of grain will be more or less stained, but there is nothing to cause any change in the opinion heretofore expressed that the crop will be the largest ever gathered in this country.—Chicago "Daily Business."

## The Canton Cabinet Filing Case Company, Canton, Ohio.

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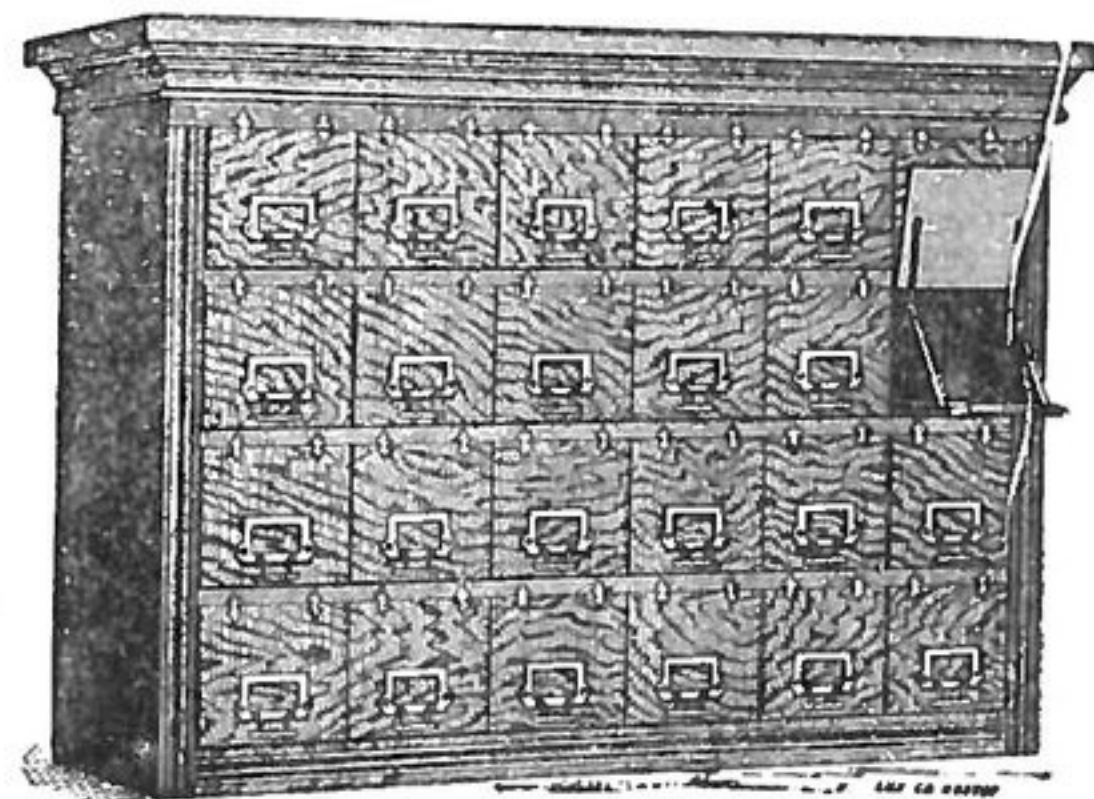
NO. 8.

**NO. 8** Represents one side of one of our Revolving Cabinet Letter Files and Document Cases Combined. It contains 80 Document Drawers and 8 Letter File Drawers. In filing letters we use first VOWEL of name on front of drawer, and LETTER FOLLOWING first VOWEL on Index Sheet within drawer. We also make more exhaustive systems which contain from 6 to 100 or more Filing Drawers.

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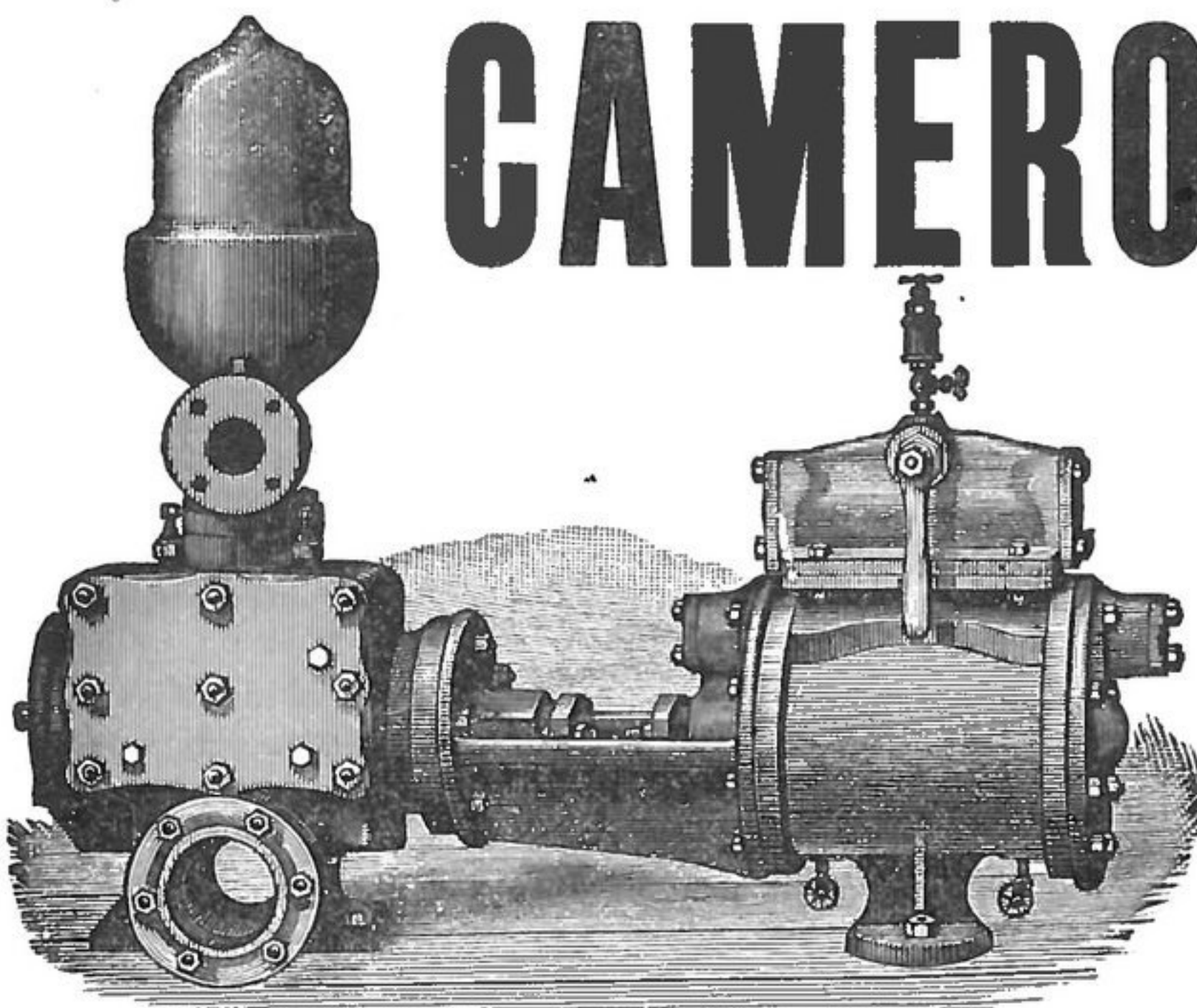
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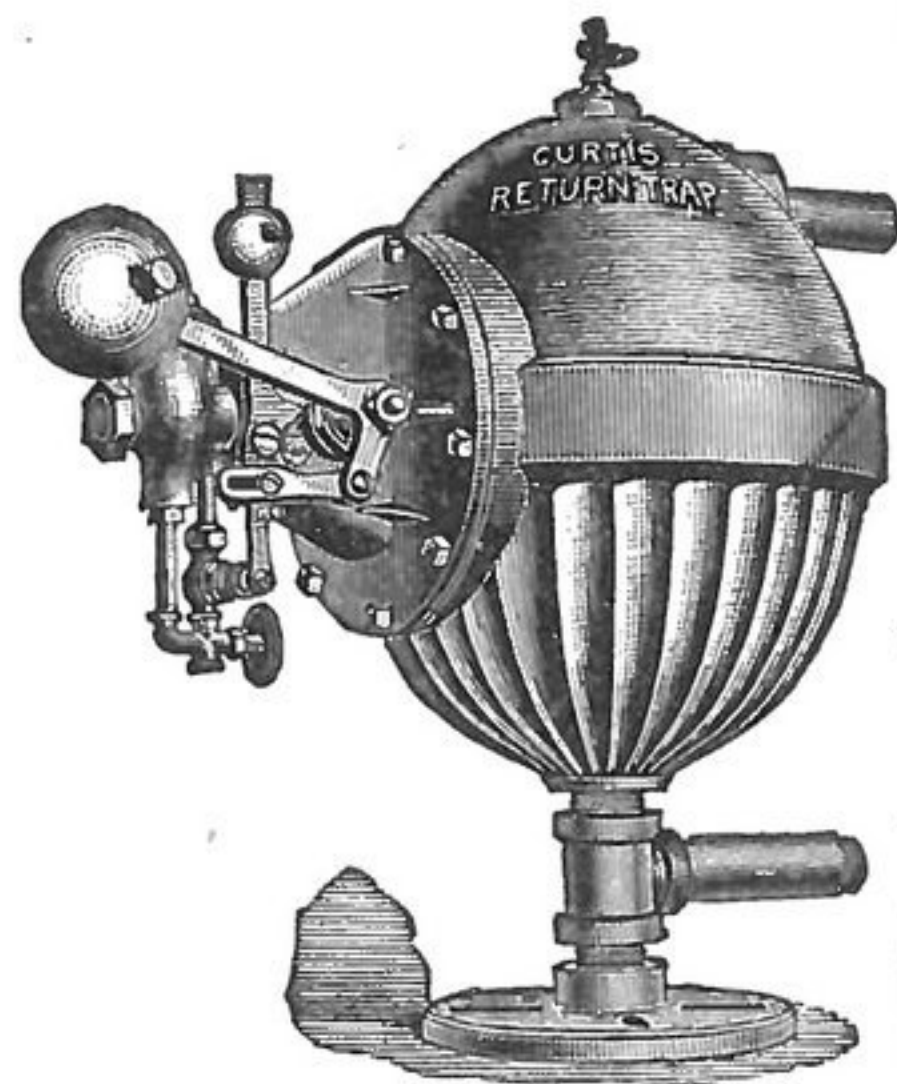
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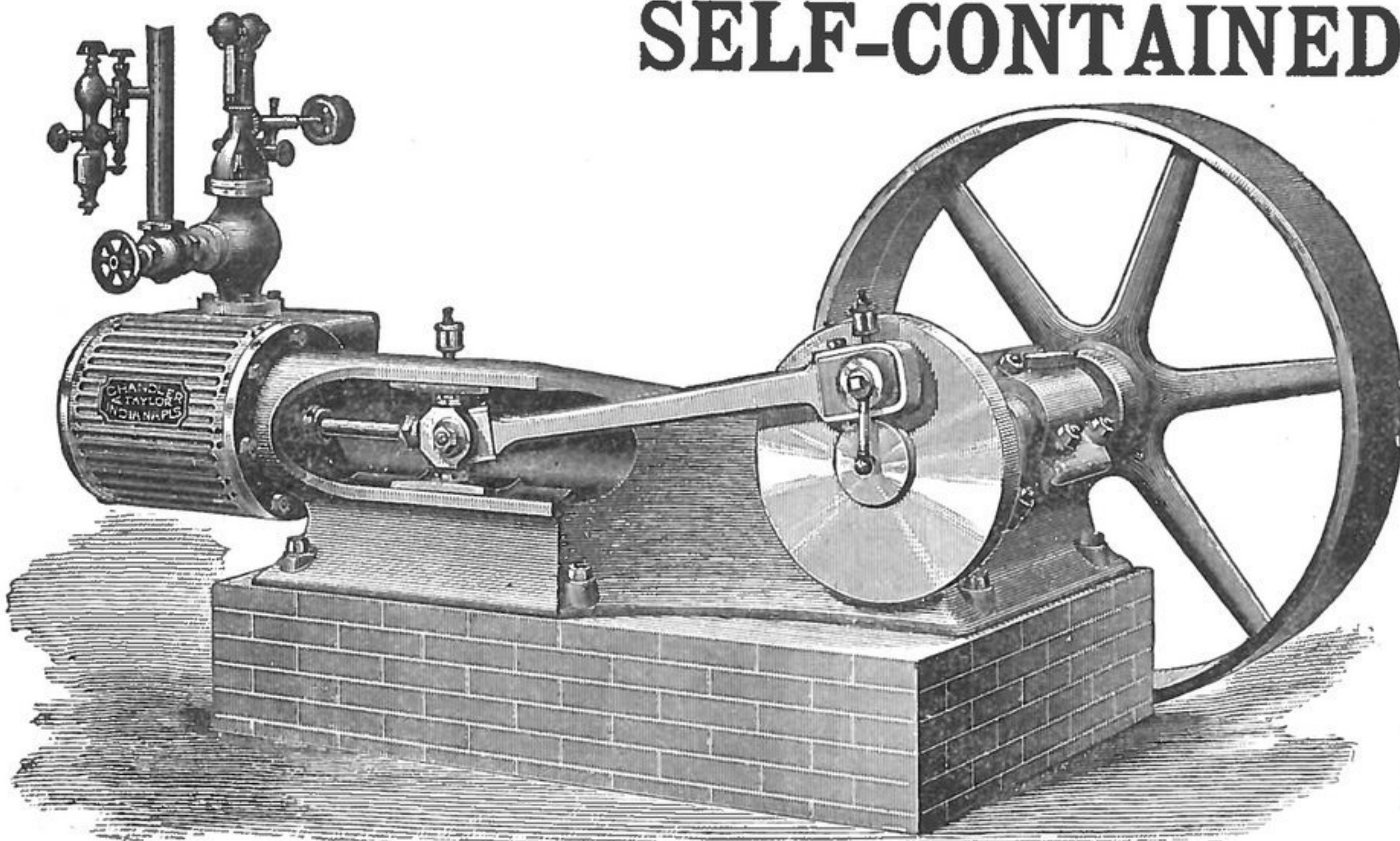
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# NOTES & NEWS

Lovelady, Tex., men build a grist mill.  
 Burlington, N. C., men project a flour-mill.  
 Strunk & Son, millers, Kane, Ill., sold out.  
 Schone Bros., Edna, Tex., improve flour-mill.  
 J. S. Betts & Co., Ashburn, start a flour-mill.  
 A. D. Smith, Emory, Ala., builds a grist-mill.  
 Flipp Bros., Waterboro, S. C., built a rice-mill.  
 T. R. Wagner's grist-mill, Siluria, Ala., burned.  
 The Connersville, Ky., flour-mill remodels to rolls.  
 Warrington & Co., millers, Pender, Neb., dissolved.  
 W. H. Sanders, Wellsburg, W. Va., rebuilds flour-mill.  
 B. F. Shriver & Co., Union Mills, Md., remodel to rolls.  
 W. L. Jackson, Archer, Fla., wants grist-mill machinery.  
 Grimes Bros., Lexington, N. C., improved their flour-mill.  
 J. P. Wilson's grist-mill, Society Hill, S. C., flood-wrecked.  
 The Puget Sound Milling Co., Seattle, Wash., incorporated.  
 Forman, Chenault & Co., Richmond, Ky., enlarge flour-mill.  
 Davenport & Morris, Waskey's Mill, Va., improve flour-mill.  
 Marsh & Andersen, Pine Bluff, Ark., build a corn and feed mill.  
 H. O. Hambaugh & Co., Peachers' Mills, Tenn., remodel to rolls.  
 Crow & Youngs, flour-mill, Alexander, Tex., sold to Fain & Hollums.  
 W. C. Fuhrer & Co.'s Elevator B, Mt. Vernon, Ind., burned; loss \$45,000.

The Orange Milling & Mfg. Co., Orange C. H., Va., are building a large flouring-mill.

Carroll & Barclay, Russellville, Ky., build a 150-barrel flour-mill; they will add an elevator.

The Texas Mill & Elevator Co., Corsicana, Tex., spent \$10,000 in improving their flour-mill.

C. O. Wright, Richmond, Va., has leased the Rio Flour Mills, Rio, Va., and remodels the plant to rolls.

Vicksburg, Miss., has the promise of a new flour-mill, to be built by St. Louis, Mo., men on the site of the Marine Hospital.

Warner Moore, Manchester, Va., has bought the Dunlap & McCance flour-mill property for \$42,000 and a cooper-shop for \$1,000.

J. T. Crenshaw, jr., and others, Dermott, Ark., incorporated the Dermott Gin Co., capital stock \$2,500, to build a grist-mill and gin.

C. C. Shelton & Son, Chattanooga, Tenn., enlarged their flour-mill and now turn out 400 barrels of flour and 1,000 bushels of meal daily.

The Sweetwater Mill & Gin Co., Sweetwater, Tex., owns a plant worth \$2,000, which they will give to any one who will build a 50-barrel roller flour-mill at that place.

S. M. Dean and others, Owensboro, Ky., chartered the Owensboro Milling Co., capital stock \$25,000, to operate the W. J. Lumpkin flour-mill, which will be enlarged to 200 barrels' daily capacity.

Blue Earth county, Minn., reports wheat yields from 24 to 38 bushels to the acre. Fields that early in the season were expected to yield 17 or 18 bushels to the acre are turning out 20 to 25 bushels. Some yields of over 40 bushels to the acre are reported.

The National Pulley Covering Co., of Baltimore, Md., have recently received from Evitt & Bro., shoe manufacturers, of that city, their fifth order for "Pulley Covering." Their initial order, placed over two years ago, is still doing as good work as when first used, and their continued orders since prove the confidence they have in it.

The Minneapolis Tribune says: "From present indications the wheat crop in Minnesota will be the largest ever raised, and must therefore exceed 40,000,000 bushels. The largest ever raised in Dakota was about 55,000,000. The outlook now indicates about two-thirds of a crop, or 35,000,000. This would make 75,000,000 in round numbers."

The Capital City Oatmeal Company is a new institution to be soon added to Des Moines', Ia., industries. The capital stock is \$20,000. The capacity of the mill will be 125 barrels per day, and the latest improved machinery will be put in, insuring a first quality article of oatmeal. The mill will be in operation within sixty days.

Geo. Sandrock and others, owners of the Queen City Elevator, Buffalo, N. Y., have incorporated the Queen City Grain and Elevator Co., capital stock \$50,000. Their elevator, whose capacity is 150,000 bushels, will be enlarged to a capacity of 280,000 bushels, and they will build a 170,000-bushel elevator for city custom on Niagara street. Their increased business has made the enlargement necessary.

The National Pulley Covering Co., of Baltimore, Md., are furnishing a great many of their "Covers" for quarter-twist belts, which, as every practical man knows, are a source of much annoyance in every shop, through their coming off the pulleys, their covering, besides saving power, remedying this difficulty. Among their recent orders was one from Alfred Dolge, the large felt manufacturer, of Dolgeville, N. Y., for his main driven pulley, 40-inch belt, 5 feet in diameter, which transmits 150 horse-power.

Mention was recently made in this journal of the sale of the building and engine of the Cincinnati Corrugating Co., on Eggleston avenue, Cincinnati, Ohio, but we learn that this is merely one step in the important move the company is making towards occupying their new works at Piqua, Ohio. Among the new features of the business will be the manufacture of iron and steel sheets for their roofing under their own auspices. The large tract of land acquired just south of the flourishing city of Piqua will enable the two companies to extend their lines of specialties in many desired directions. The manufacture of all the sheet metal used by the company under their own immediate supervision is an advantage not easily estimated in securing a uniform and superior quality.

## BOOKS AND PAMPHLETS.

We have just received the September number of *Godey's Lady's Book*, and our unqualified verdict is that it is a boss number. The fashions are good, the literature first-class, and the numerous illustrations not only designs, but really beautiful pictures. The publishers should meet with every success; their efforts to please the popular taste certainly deserve it. No lady should be without this favorite monthly fashion magazine. Address the publishers at Philadelphia, Pa.

A very interesting and sensible paper in the current number of *Good Housekeeping*, written by Isabel R. Wallach, presents some strong reasons why care should be exercised in selecting a carriage for the baby and shows what directions it should take. It is a more important matter than fathers and mothers are apt to think. *Good Housekeeping* presents in every number a generous quantity of carefully-chosen practical selected matter in addition to its very extensive original bill of fare. The number for August 16 is specially rich and good in this regard.

PRACTICAL BLACKSMITHING.—A collection of articles contributed at different times by skilled workmen to the columns of "The Blacksmith and Wheel-wright," and covering nearly the whole range of blacksmithing, from the simplest to some of the most complex forgings. Compiled and edited by M. T. Richardson, Editor of "The Blacksmith and Wheel-wright." Illustrated. Vol. 1. Price \$1.00. M. T. Richardson, Publisher, New York. Notwithstanding the fact that every village and hamlet in the civilized world contains a blacksmith, and has ever since mankind learned the various uses of iron and steel, nobody has ever written a book on the art of blacksmithing. A chapter has now and then appeared in works on mechanics, but these comprise the extent of the world's printed knowledge of an art without which mankind would relapse into barbarism. The present work is a compilation of practical articles which have appeared during the last ten years in the columns of "The Blacksmith and Wheel-wright." Ancient blacksmithing and primitive tools are considered briefly, and then plans of shops, chimney building, forges, and descriptions of a great variety of tools are given. The illustrations are numerous, and the book would appear to be of great value to all workers of iron.



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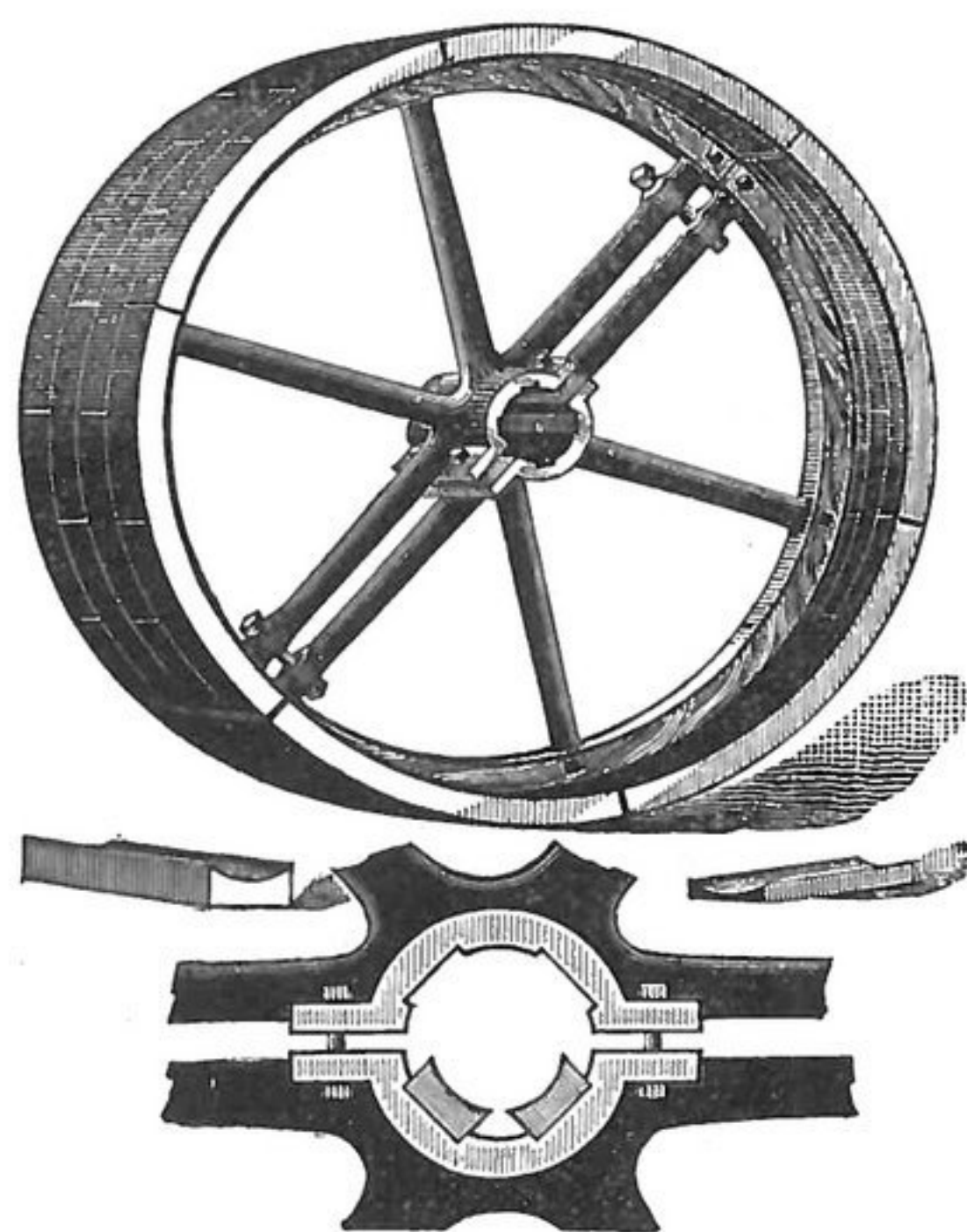
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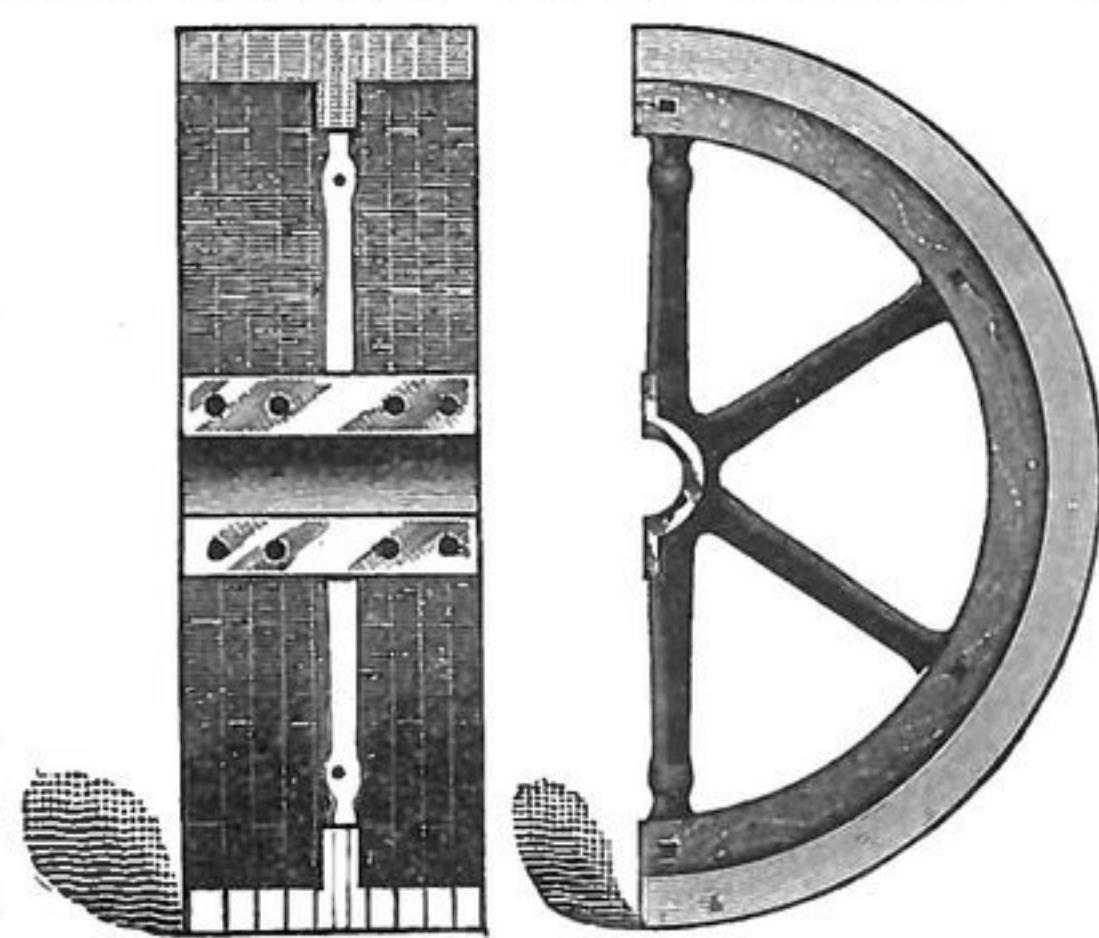
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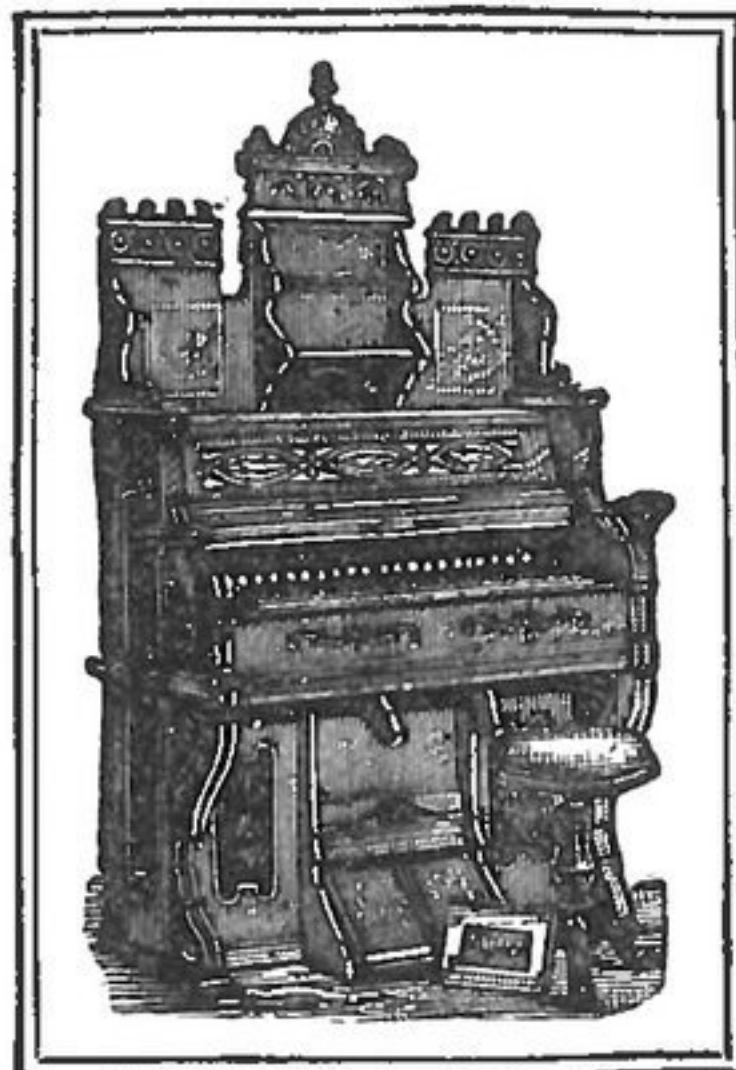
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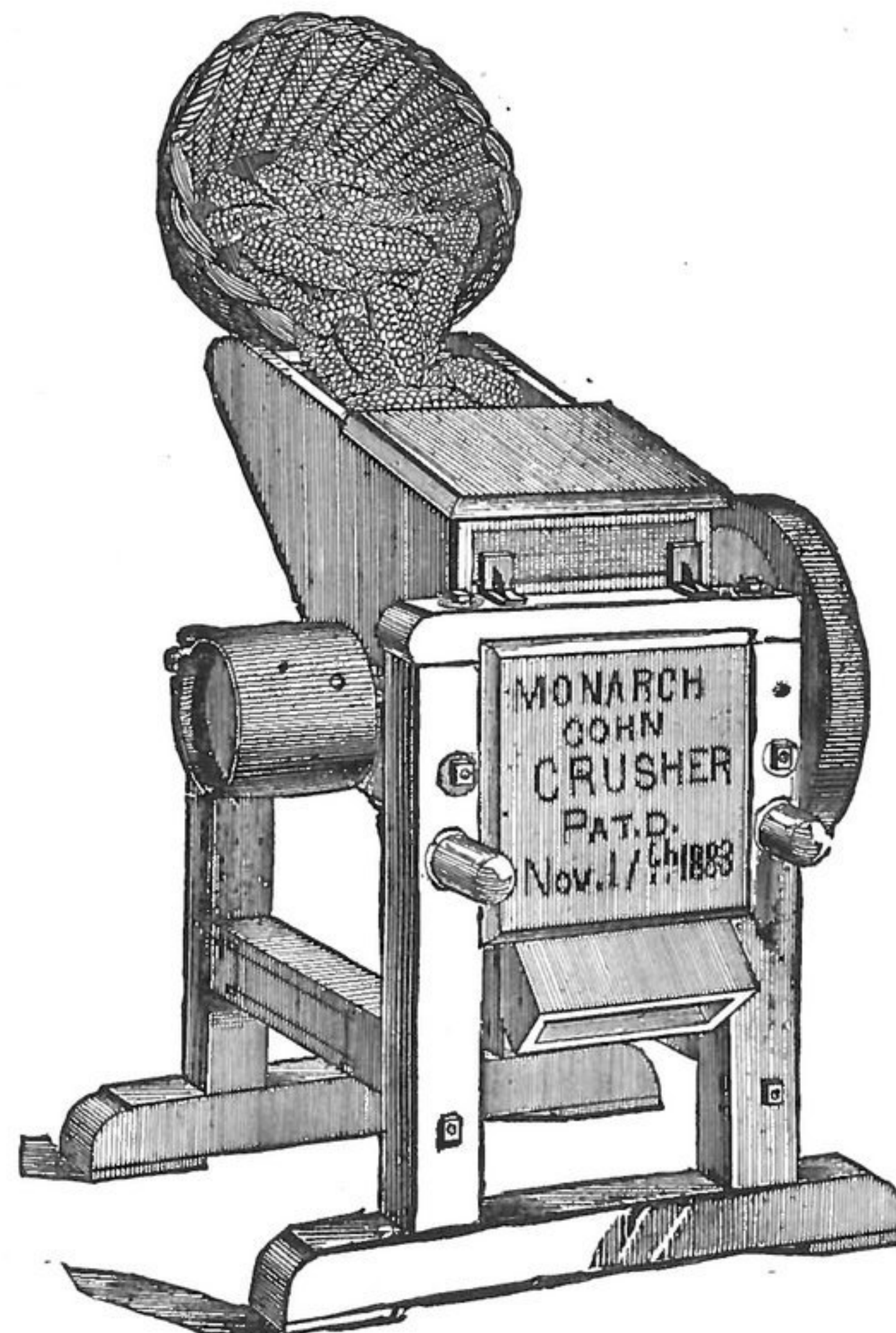
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## EUROPEAN ECHOES.

THE harvest in France promises well on the whole. According to the "Journal De L' Agriculture" it is already finished in the south and in full swing in the center and north. The favorable conditions of May somewhat compensated for the backward tendency of the spring, but has not wholly retrieved the lost time. It is the rye that has more particularly suffered, and from this the least satisfactory results may be anticipated. The yield of wheat will certainly be the best that has been obtained for several years, more especially with respect to the quality. The sheaves may not be so numerous as could be desired, but the ears are large and well filled.

A RECENT letter from Odessa, Russia, says: Never within the memory of the oldest British resident has such heat prevailed in this region of Russia. Death from sun-stroke occurs almost daily even among the native laborers. For the last ten days the thermometer has never registered less than 144 degrees at noon. One day last week it was 130 in the shade. Out of reach of artificial irrigation, all vegetation is parched and withered. The long scorching days, unbroken even by a passing thunder-storm, succeed each other with perfect regularity. Even after sundown there is no breeze, and the nights are so sultry that sleep is impossible. A sun-shade is necessary as early as 5 a. m.

AN ENGLISH letter of July 30 says: The best farmed lands are likely to yield heavy crops this year in most parts of Great Britain, and the rains of the past fortnight, if somewhat diminishing our prospects of fine wheat and barley, have been beneficial to almost every thing else. This matter is of far more consequence than the rain or the low temperature and sullen skies, with their joint threats of blight and rust and mildew in the corn, as well as a spread of potato disease and of mold among the hops. Harvest has begun, but is making a snail-like progress; it takes half-a-dozen of such days as we have recently been having finally to ripen fields, which a single day of continuous sunshine and still warm air would fit for the sickle.

THE following summary of the crop prospects of Austria-Hungary has been forwarded to the State Department at Washington by Consul-General Goldschmidt of Vienna: "Austria proper will have an average crop of about 50,000,000 bushels, Hungary, at least 35 per cent. below average, about 90,000,000 bushels, which will give the Austro-Hungarian monarchy 75 per cent. of an average crop. The official report of 1888 reads as follows: Austria proper, 60,000,000 bushels; Hungary, 140,000,000 bushels; Austria-Hungary, 200,000,000 bushels, a decrease of 60,000,000 bushels this year from last year's report. The estimated home consumption in Austria-Hungary is 155,000,000 bushels. Hence there will be little or no export of wheat from the Austro-Hungarian monarchy. Last year's wheat in elevators and in farmers' hands is estimated at about 25,000,000 bushels."

THE Russian Minister of Agriculture summed up the Russian cereal situation August 1 as follows: The absence of snow in the first half of the winter, with very strong frosts, is the special characteristic of the winter 1888-89 nearly in the whole of Russia, except the district near the Carpathians, on the southwest, and situated near the foot of the Urals, in the east of Russia. This circumstance occasioned considerable damage to the winter wheat in many districts. The winter of 1888 commenced very early. Frosts accompanied with snow happened nearly everywhere in the end of October. In the south of Russia, on account of the enormous crop of last year, the farmers were still busy threshing the old corn, and also on account of the drought in the second half of August and September, farmers were late with their winter sowing; the sudden and early arrival of the winter caught part of the winter fields not sown. This circumstance made great havoc with late winter wheat in the

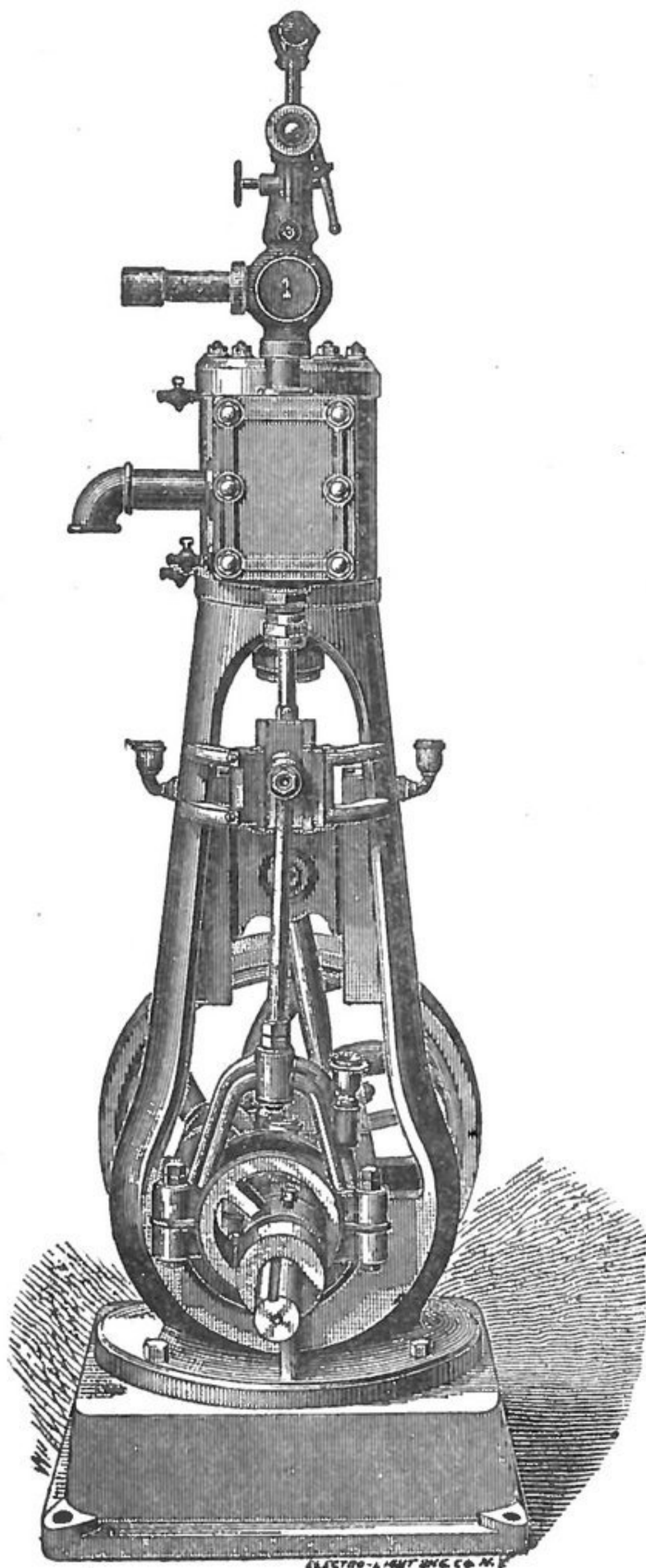
south districts as well as in the south-west and in some northern districts. The chief district where the winter wheat is unsatisfactory is in the south, extending a good distance north, chiefly on the right banks of the Dnieper and Volga. From the rest of European Russia, though they were occasionally damaged, still on the whole more than an average crop can be expected, and in four Governments even good and very good. The best crop of the winter wheat is expected in the east-south-east part of Peron, the whole of Ufim, and the largest part of Orenburg, in conjunction with some districts of Samara and Viatka. In these parts, near the Urals, the crop is very good, in fact, splendid. The other part of the good crop of winter is in Central Russia, which comprises the following Governments: Moscow, Smolensk, Kaluga, Tulck (with some parts of Kiasin), Orloff, Mogiloff and Pskoff. The third part which is very satisfactory are the Government Volin districts, near the Visla and Baltic provinces, also Kovno. Lastly, the fourth part consists of the northern districts, Archangel, Olonietz and some parts of Vologda. Wheat, as a whole, suffered more than rye. Spring wheat generally was in much better condition than the winter and promised more than an average crop, but in May it suffered much from drought, and in some parts from light frosts. In the middle of June favorable rains fell, and the crop was greatly improved. If a line were drawn through the map of European Russia from the mouth of the Don, through Penza, Kostrome, Vologda and Petrosavodsk, then the whole of European Russia would be divided into two equal parts, in the east of which the spring wheat was on the 1st of July very good indeed; on the west from that line, though it has improved by the middle of July, still the crop was expected to be only middling, or slightly less. On the whole, from the information received, it is anticipated that the crop of rye will be only slightly below the average, winter wheat much below average, and spring wheat much above average.

### CONSEQUENCE OF ABANDONING OATMEAL.

Readers may make their own discount on the following statements. United States Consul Underwood, Glasgow, Scotland, devotes his latest state paper to the consideration of the social and economic effects of oatmeal, or rather of the abandonment of oatmeal by a portion of the poorer inhabitants of Glasgow. It seems that, besides dwelling in wretched tenements, without room, without light, without adequate drainage, which is a state of things more or less beyond their control, these people have inflicted upon themselves an evil which was entirely voluntary. They began to despise their traditional oatmeal and substituted for that nutritious diet a regimen of white wheat bread and tea. So long as the Scots subsisted upon oatmeal porridge they were sturdy and stalwart. Everybody knows the story of the Englishman who told the Scotchman contemptuously that in England oats were deemed fit to be eaten only by horses, whereupon the Scotchman replied, "And see what fine horses ye have in England, and what fine men we have in Scotland!" If Mr. Underwood is right, it would have saved the Glaswegians from untold evils if they had been governed by a like pride in their national dish. Their wheaten bread and tea diet, joined with unsanitary lodgings and whiskey, has produced a race of cripples. The consul says: Nothing in the condition of Scotland to-day is so painful to the benevolent or the philosophic observer as the spectacle presented in Glasgow of deformed men, women and children. \* \* \* No city in western Europe, and certainly none in the United States, has any thing like the amount of deformity seen in Glasgow. In my daily walks I see hundreds of cases, and they are almost always cases of deformed limbs. There are wards in the hospitals especially for the treatment of these cases. Intelligent people are trying to repair, besides the limbs of these cripples, the foolish mistake which the Glasgow people made in throwing away their cheap and wholesome oatmeal for innutritious bolted wheat flour. They are using every means to re-introduce the "parritch" and the cake; but disused customs are hard to restore.



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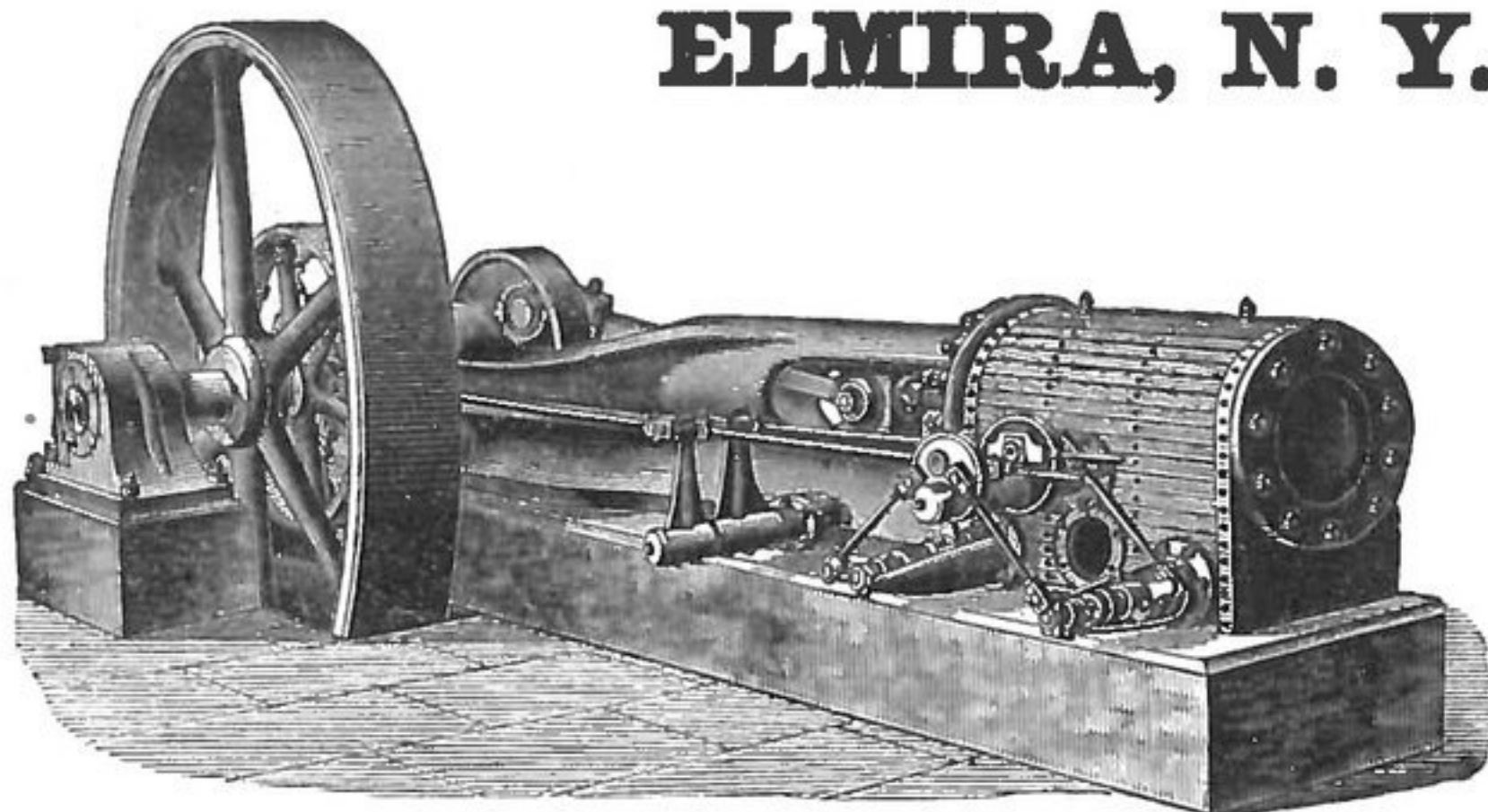
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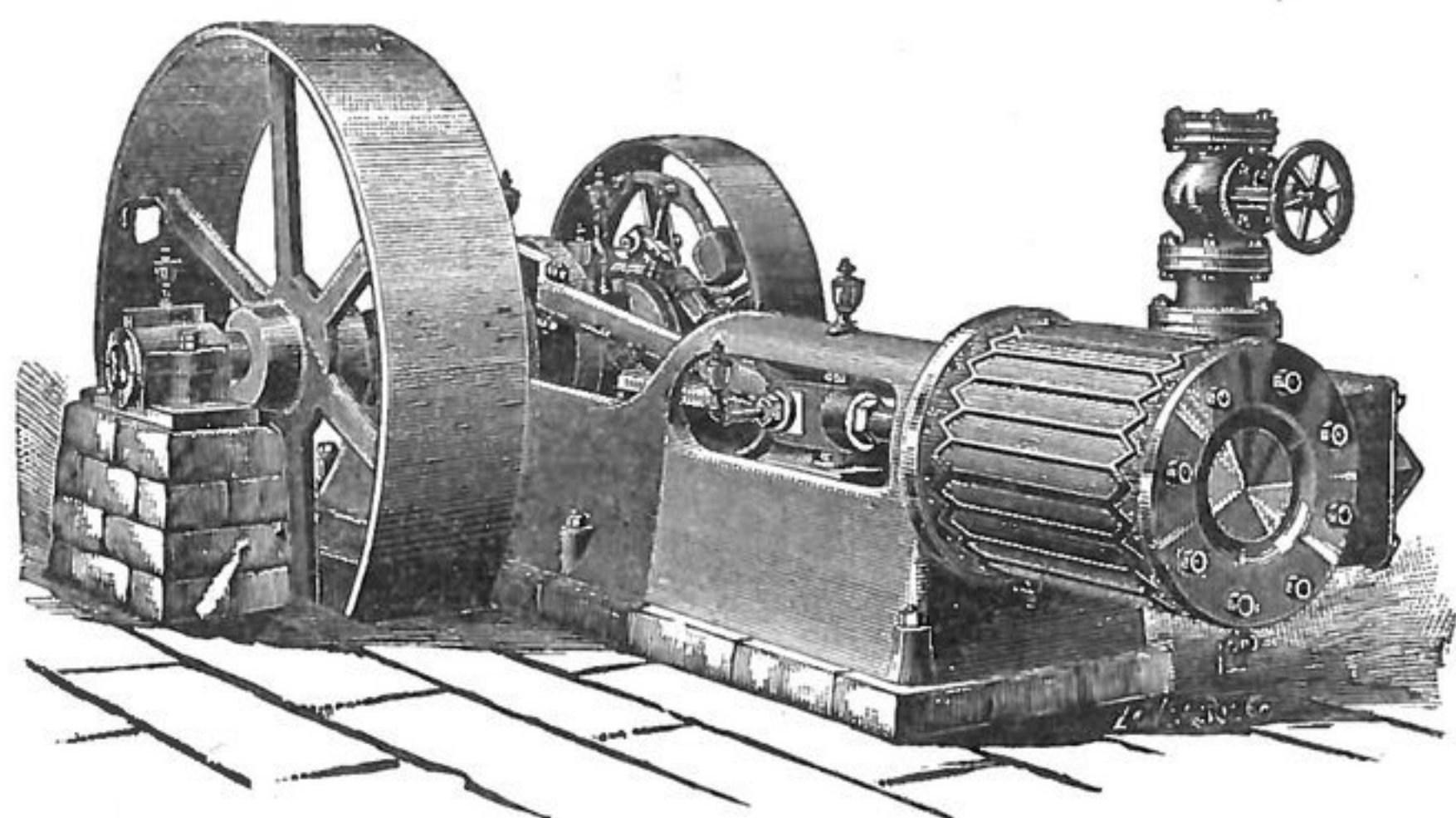
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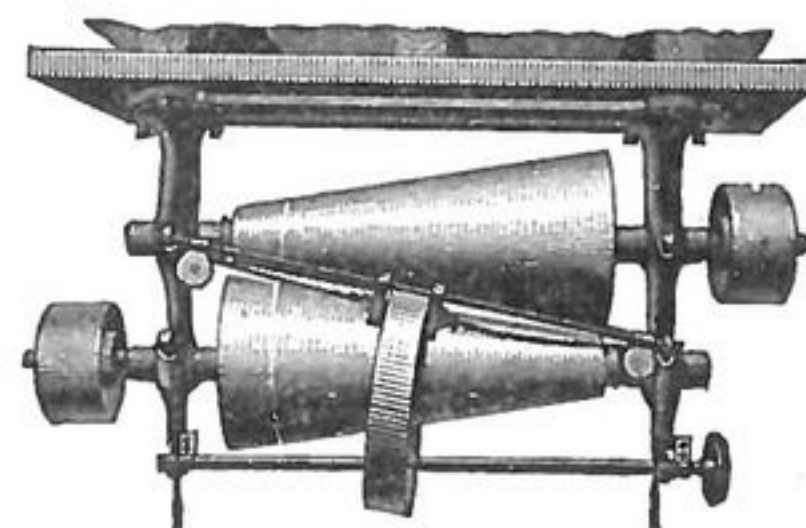
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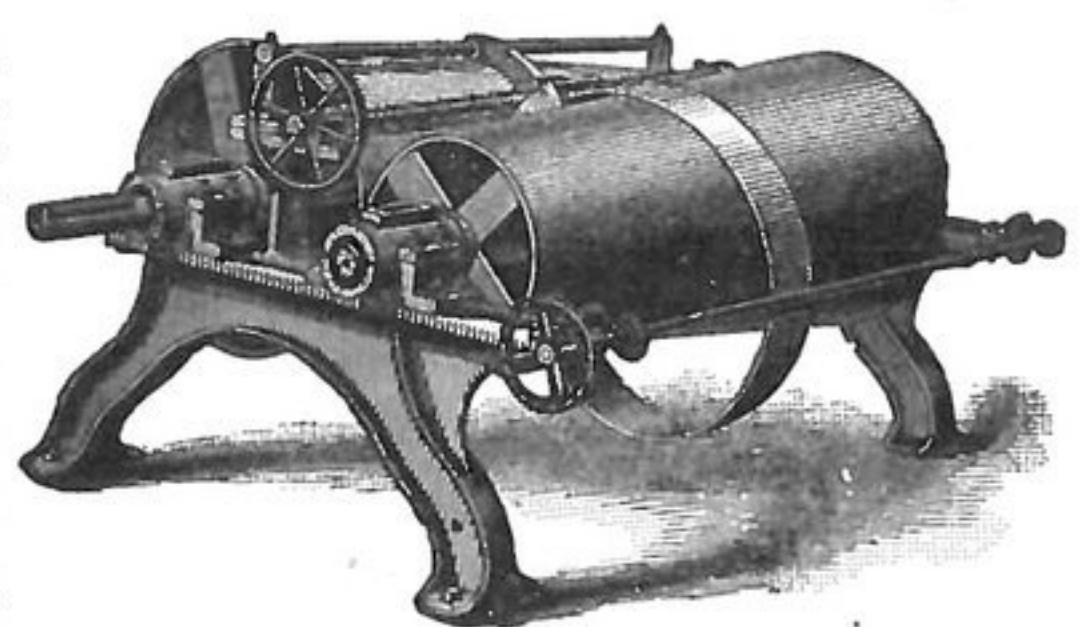
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**NATIONAL PULLEY COVERING CO., BALTIMORE, MD.**





OFFICE OF THE MILLING WORLD,  
BUFFALO, N. Y., Aug. 17, 1889.

Friday of last week brought dull and easier markets, in spite of wet weather in England and unfavorable weather in the spring-wheat region of the United States. August wheat closed at 85c. Options 750,000 bushels. August corn closed at 43½c. and oats at 26½c. Wheat flour was in better export demand for bakers' extras, but the trade was generally slow, at unchanged prices. The other lines were quiet.

Saturday brought more active and generally weaker and lower markets, under hammering by shorts who held Chicago orders. August wheat closed at 84½c. Options 760,000 bushels for the half-day. August corn closed at 43½c. and oats at 26½c. Wheat flour was unchanged and dull, with weak spots beginning to show here and there. The minor lines were quiet and featureless.

The visible supply in the United States and Canada was:

	1889. Aug. 10.	1888. Aug. 11.	1887. Aug. 13.
Wheat.....	13,370,608	25,227,600	32,770,061
Corn.....	6,938,425	8,539,092	6,802,771
Oats.....	4,003,754	1,773,327	3,710,831
Rye.....	807,562	176,989	301,434
Barley.....	444,021	145,535	137,901

Monday brought generally dull and irregular markets, with wheat stronger by a shade on the government report and firmer cables. August wheat closed at 84½c. Options 750,000 bushels. Further damage to the Russian crop was reported. Trade was small all around. August corn closed at 43½c. and oats at 26½c. Wheat flour was weaker in some lines, as holders are tiring of holding stocks in the face of the fine and abundant new crop of wheat. The sales were small. The minor lines were quiet and featureless.

Tuesday opened with easy and lower cables, that weakened the markets, and closed with reports of wet weather in the West, that toned up the markets. August wheat opened at 84½c. and closed at 85c. Options 650,000 bushels. Home trade was fair and foreign trade light, exporters taking only a few loads. August corn closed at 43½c. and oats at 27c. Wheat flour ruled unchanged and dull, and in buyers' favor, the steadiness in wheat checking all tendency to lower prices. Trade was in fair volume. None of the other lines showed notable changes, in either prices or conditions.

Wednesday brought bad reports of weather conditions in Europe, higher cables, lighter receipts west, shorts covering and light offerings, making the markets decidedly active and higher. August wheat opened at 85½c. and closed at 86c. Options 2,000,000 bushels. Over 150,000 bushels of wheat were taken in St. Louis for the Argentine States in South America. It was also reported that Chicago had sold 150,000 bushels for the River Plate. In New York trading was small, both for home and export trade. August corn strengthened up from 44½c. to 44½c. at closing. Both these lines were active. Rye grain was firm at 52½c. for Western No. 2 delivered, 56c. No. 1 State delivered, and 54½c. for ungraded delivered. Barley was slow. New crop offerings from the Bay of Quinte, Canada, were made at 80c. to arrive in October, but only 75c. was bid. Malt was in moderate demand at 90c. @ \$1 for Canada, and \$1.05 for choice. Mill-feed was dull at the following quotations: Bran 55@65c; 60-lb. do do; 80-lb 60@65c; 100-lb 75@80c; sharps 85@90c; rye 70@75c. according to the different mills.

Wheat flour was still dull and in buyers' favor, although not quotably lower. Exporters were out of the market, although there was im-

proved inquiry for low grades. Trade was small. Following are the quotations for the day:

SPRING FLOUR.		
	Sacks.	Barrels.
No grade.....	\$1.60@1.75	\$....@....
Fine.....	1.95@2.05	2.10@2.45
Superfine.....	2.15@2.45	2.55@2.92
Extra No. 2.....	2.80@3.10	3.00@3.25
Extra No. 1.....	3.25@3.65	3.50@4.15
Clear.....	3.85@3.65	3.65@3.90
Straight.....	4.15@4.65	4.30@5.05
Patent.....	5.40@5.90	5.30@5.90

WINTER FLOUR.		
	Sacks.	Barrels.
No grade.....	\$1.75@1.85	\$....@....
Fine.....	2.25@2.35	2.35@2.50
Superfine.....	2.50@2.60	2.60@2.75
Extra No. 2.....	2.60@2.85	2.65@2.85
Extra No. 1.....	2.85@3.10	3.35@3.75
Clear.....	3.65@4.15	4.05@4.25
Straight.....	4.30@4.65	4.45@4.80
Patent.....	4.50@4.80	5.00@5.10

CITY MILLS.		
W. I grades.....		4.25@4.35
Low grades.....		2.60@2.65
Patents.....		5.10@5.90

Rye flour was dull at \$2.75@3. Corn products were strong with corn, at the following quotations: Coarse city meal 84c; fine yellow do. \$1.00; fine white \$1.05; Brandywine \$2.75; Southern and Western \$2.60@2.75; grits \$2.60 @2.70; hominy grits \$3 in bbls, \$1.20 in sacks; granulated brewers' meal \$1.30 per 100 lbs in sacks. Corn flour \$2@3 for bbls; chops 60@65.

Thursday brought generally dull markets. August wheat closed at 85½c. Options 1,080,000 bushels. August corn closed at 44c. and oats at 27½c. Trade was fair in volume in both lines. Wheat flour was dull and unchanged. The minor lines were featureless.

#### BUFFALO MARKETS.

WHEAT—Owing to the new hard wheat which is arriving every day the different grades will have to be designated by the years as follows: Old No. 1 hard of crop '87 was sold at \$1.05 early in the day; do '88 at \$1.05 asked; do new or '89, 87½ asked for first half of September, No. 1 Northern was quoted at 92c, and No. 2 spring at 90c. At the close 2,000 bu No. 1 Northern sold at 92c, which was the only sale reported all day. The hard wheat market was dull and unchanged. Winter wheat in fair demand and market firm. Sales were made of 2 carloads No. 3 red at 75c; 4 do No. 4 red at 78c; 2,000 bu No. 1 white California at 92c; and 2 carloads No. 2 extra at 88c. CORN—In active demand and market steady; sales were made of 19,000 bu No. 2 corn at 40½c; 2 do No. 3 do at 40½c; and 3,000 bu No. 2 yellow at 42c. No. 2 corn near by was offered at 40½c, and No. 3 do at 41½c. OATS—In moderate demand and market irregular. No. 2 white was offered at 30½c in store; track receipts held at 31c. Old No. 2 mixed was quoted at 26c. in store, and white State oats from farmers' wagons at 37@38c. BARLEY—The only sale of barley or barley malt throughout the week was 10,000 bu of the latter, which were sold to Mr John B. Manning at 50c. per bushel, 80c per bushel less than the regular market price RYE—Quiet and steady. New No. 2 was quoted at 46c, on track; old do 49c asked in store. Following may be found a list of sales made at the Merchants' Exchange for the past week: Thursday, 1 carload No. 2 Western sold at 49c on track; but later was offered at 48c; Friday, 1 do No. 2 rye sold at 47c on track; and 2 do old at 49c in store; Saturday or Monday no sales were reported; Tuesday, 2 carloads No. 2 rye sold at 46c on track; Wednesday, no sales were made. CANAL FREIGHTS—Steady. Rates of freight on wheat to New York 4c, on corn 3½c, and on oats 2½c; no quotable rates on rye or barley. Corn to Rotterdam 3½c; oats 2½c. Corn to Albany 3½c; do to Utica 2½c; wheat to Syracuse 2½c; corn 1½c; wheat to Rochester 1½c; lumber rates to New York \$2.00, to Albany \$1.50. RAILROAD FREIGHTS—To New York, Baltimore and Philadel-

phia rate points on grain, flour and feed, 13c per 100 lbs; to Albany and West Troy, 10½c. FLOUR—City ground—Patent spring, \$6.25@6.50; straight Duluth spring, \$6.00@6.25; bakers' spring, best, \$5.75@6.00; do rye mixture, \$5.00@5.25; patent winter, \$6.00@6.25; straight winter, \$5.00@5.25; clear winter \$4.75@5.00; cracker, \$4.75@5.00; graham \$4.75@5.00; low grade, \$3.00@4.00; rye, \$3.25@3.50 per bbl. OATMEAL—Akron, \$6.00; Western \$5.75 per bbl; rolled oats, in cases, 72 lbs \$3.25. CONMEAL—Coarse, 85@90c; fine, 90@95c; granulated, \$1.50 per cwt.

A Baltimore, Md., report of August 8 says: At a meeting of the Baltimore Corn and Flour Exchange it was decided to inquire into the causes leading to the loss of the grain trade and the city's present empty elevators and to issue circulars to Western grain men asking these questions: 1. Have you sold any wheat for shipment to Baltimore after August 1? 2. Where did you sell and what was the difference in price as compared with Baltimore? 3. How does Baltimore inspection compare with other markets? 4. Do you give any other market the preference over Baltimore? 5. What advantage, if any, do you find in shipping to the lake ports since August 1 as compared with Baltimore? These questions suggest the probability that Baltimore dealers think there are other reasons besides lower freight rates to New York for the falling off in their grain receipts. Prominent grain men here say that it has been long felt that there was not sufficient co-operation and combination of effort to increase or even retain the Western trade and secure the protecting rates from the great trunk lines. One of the leading shippers from the West, when asked recently why he shipped to New York in preference to Baltimore, replied that if the business men of the latter city did not secure freight rates competing with the canal and lake route the Western shippers could not be expected to lose money by sending their cereals here instead of to New York, although Baltimore was the preference of a majority of Western grain shippers. The Baltimore merchants suspect that the New York and Philadelphia shippers are getting better ocean rates and that probably the railroads are discriminating in their favor. This city had an immense grain trade which has been gradually slipping away from it. Shipments via the Chesapeake and Ohio Railroad to Newport News have had a great deal to do with it, and Baltimore merchants to a large extent have their own lack of energy to blame.

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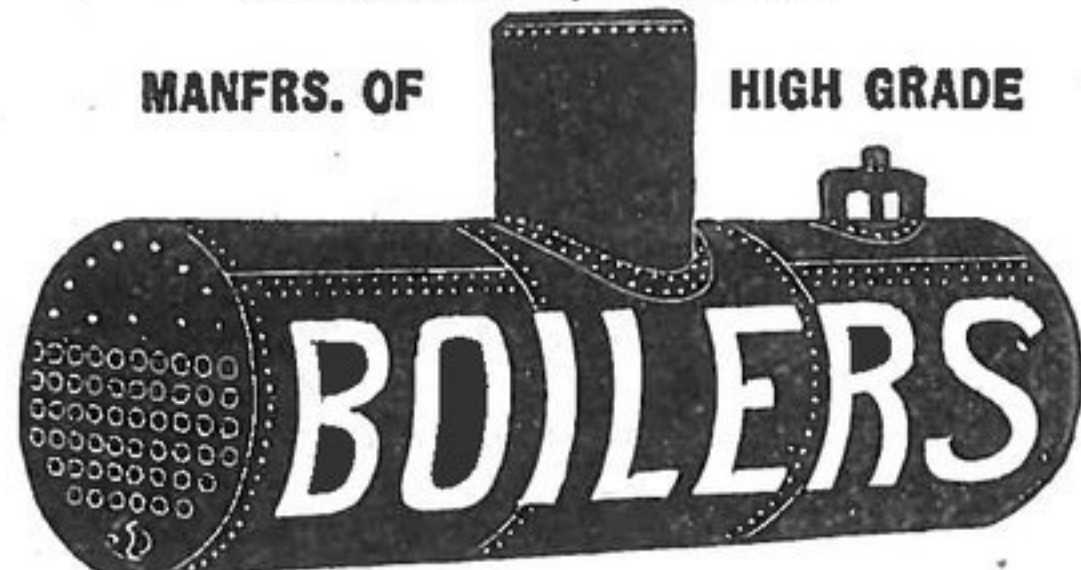
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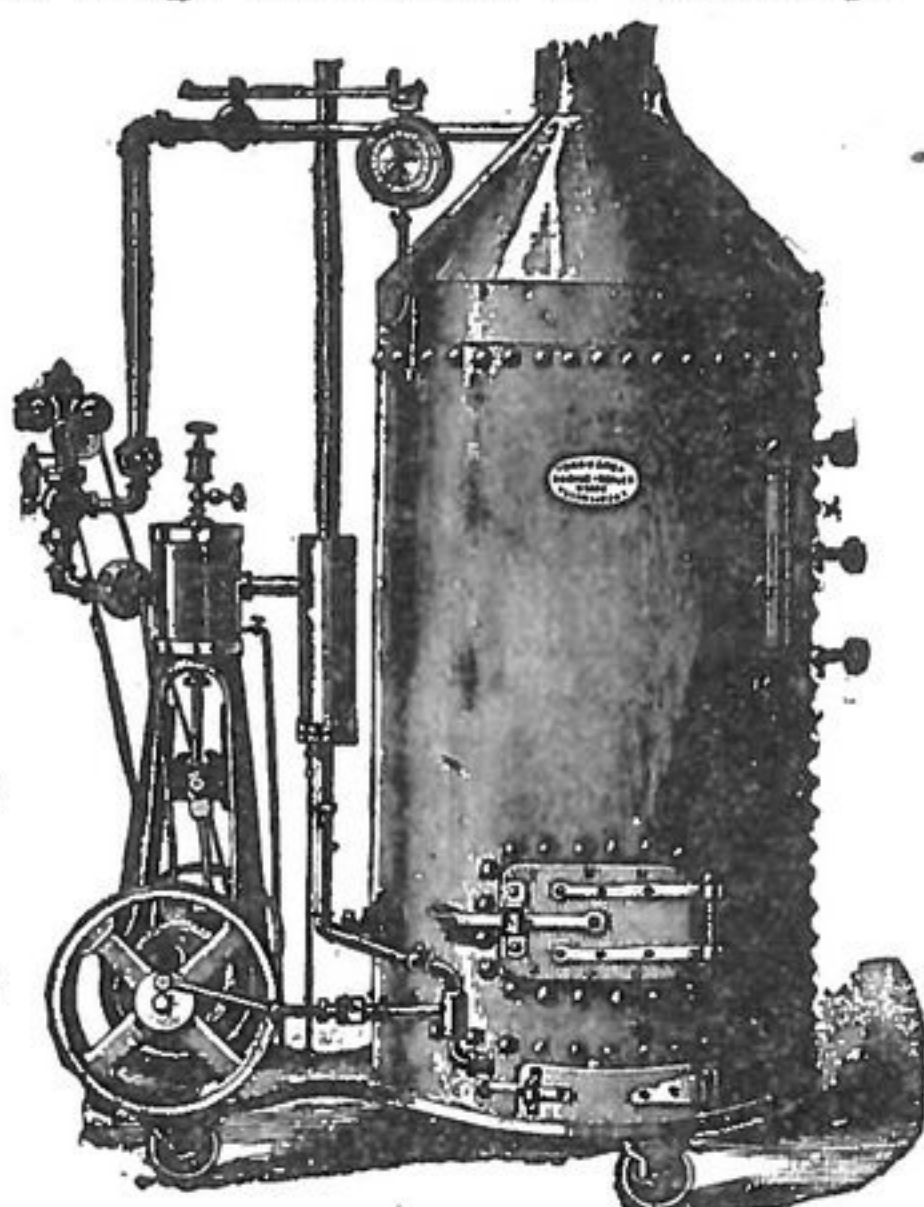
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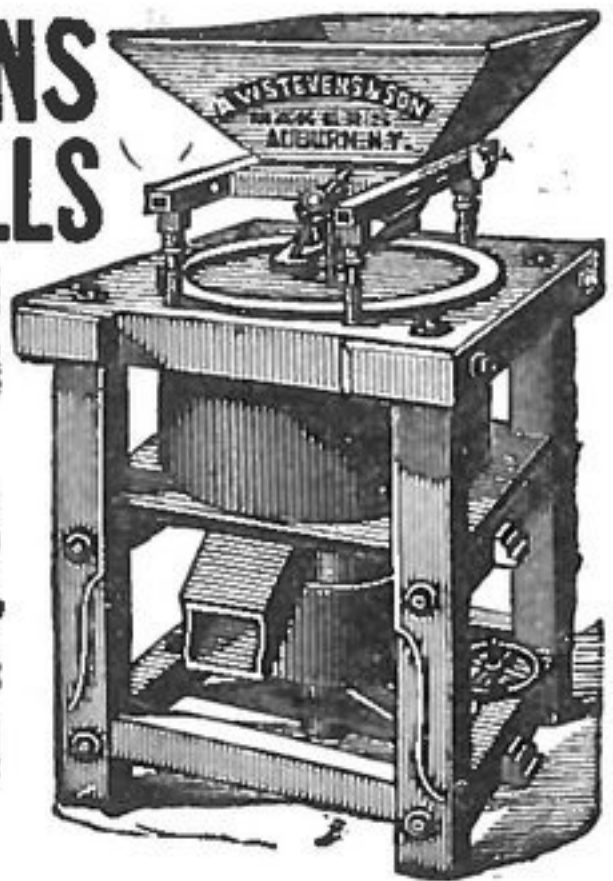
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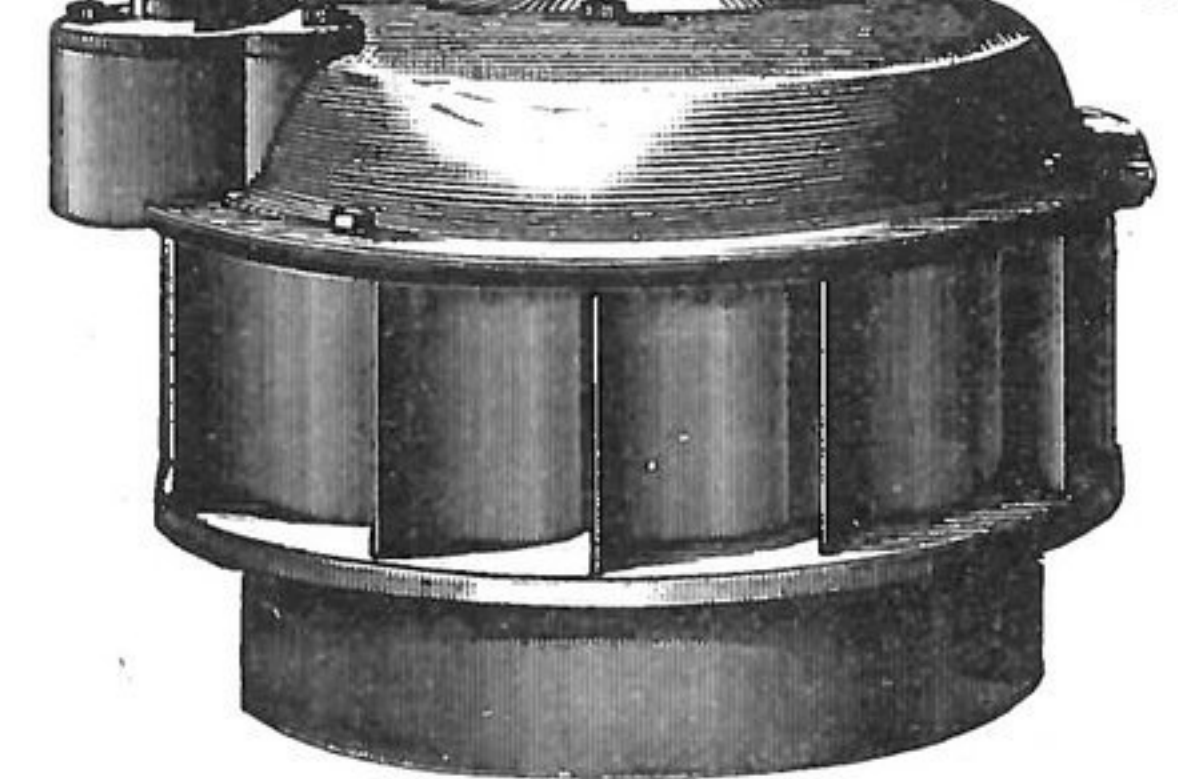
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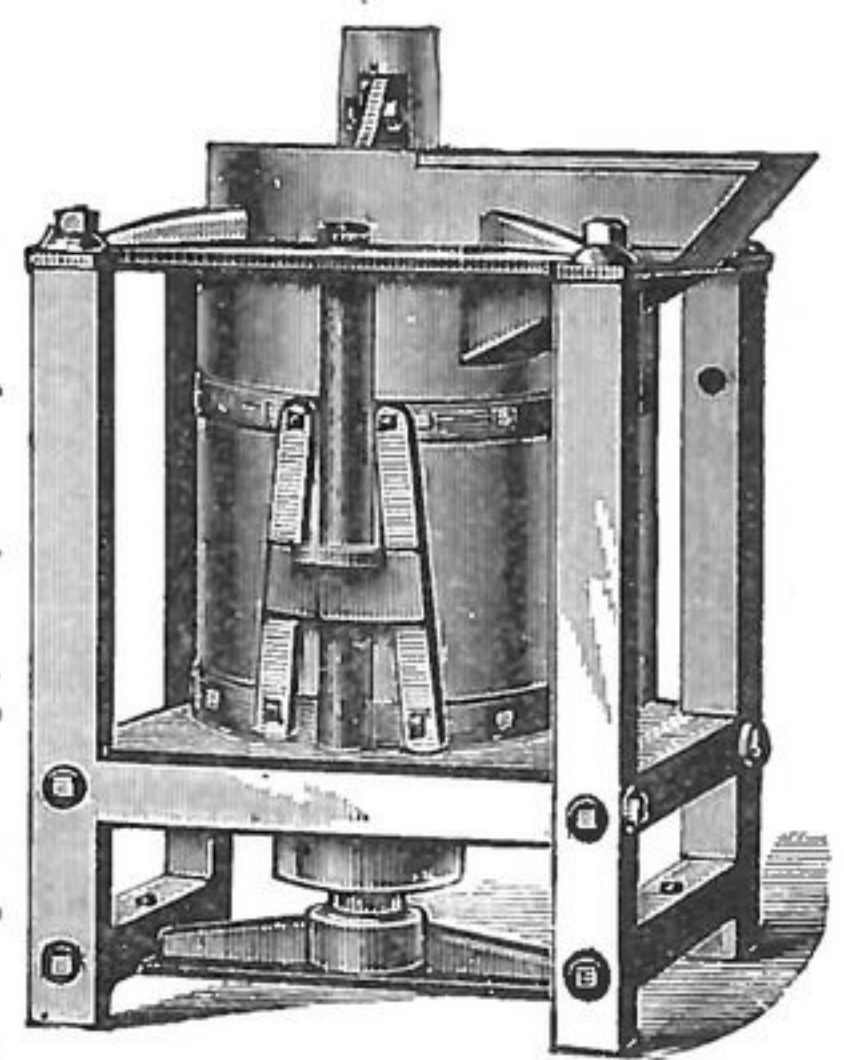
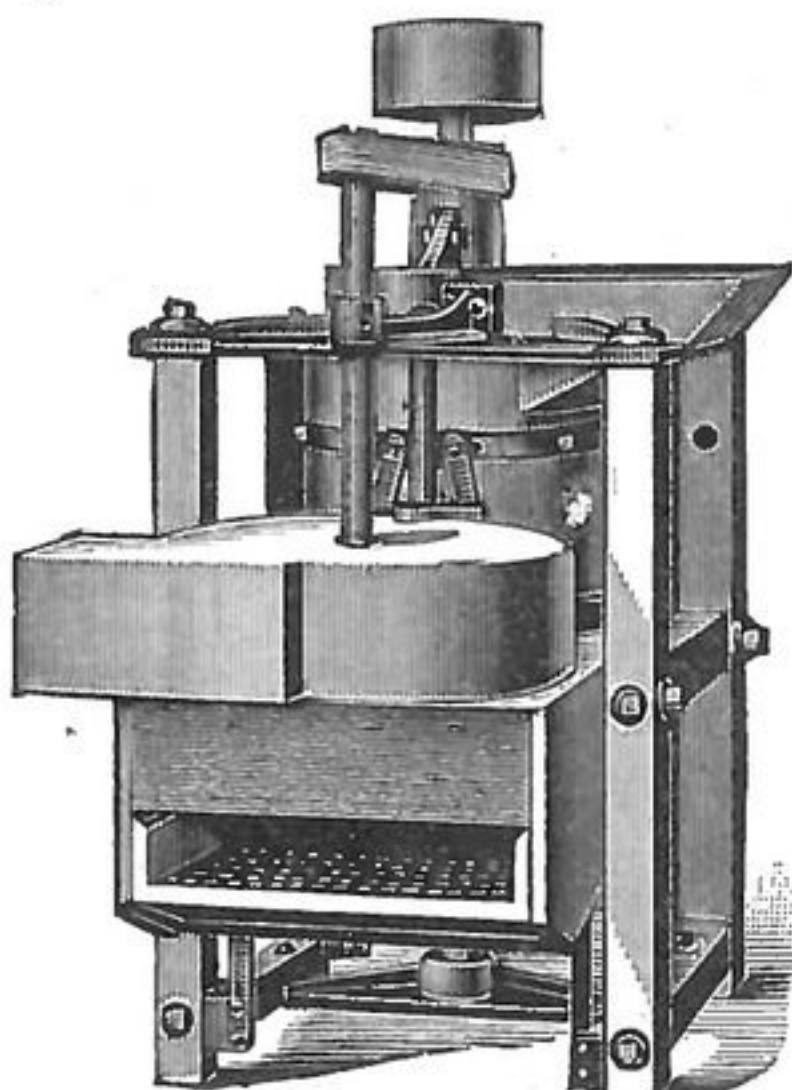
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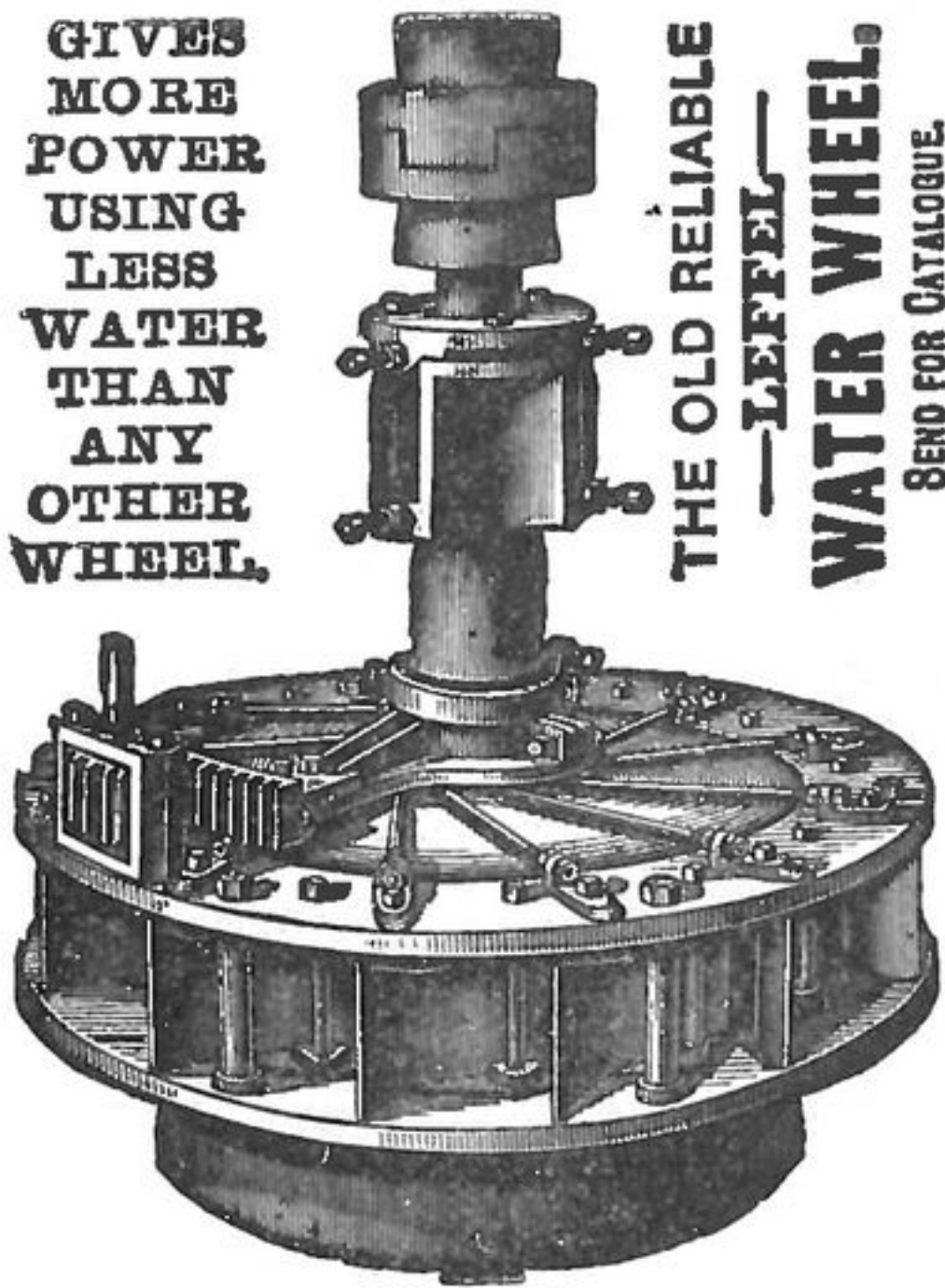
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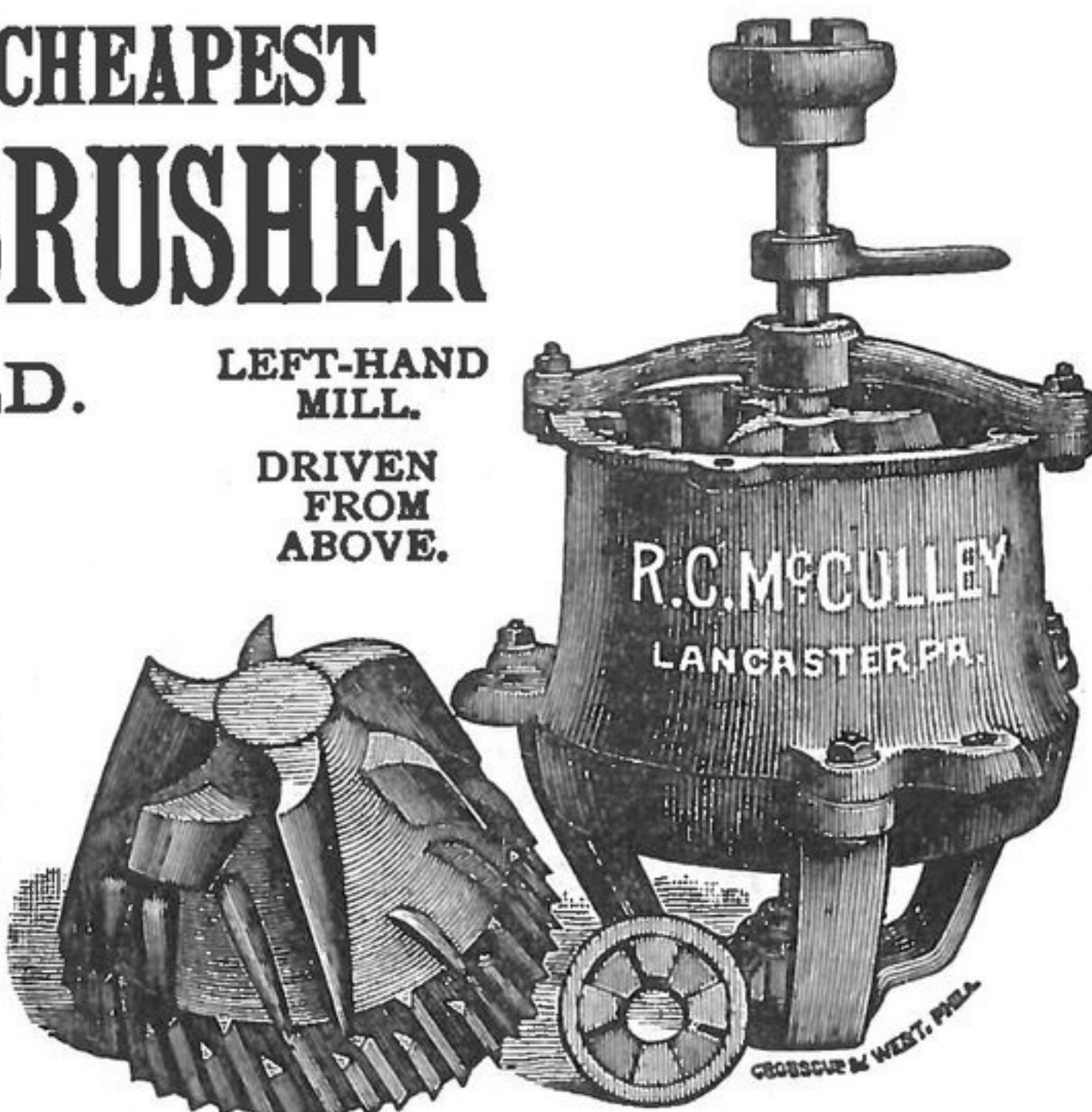
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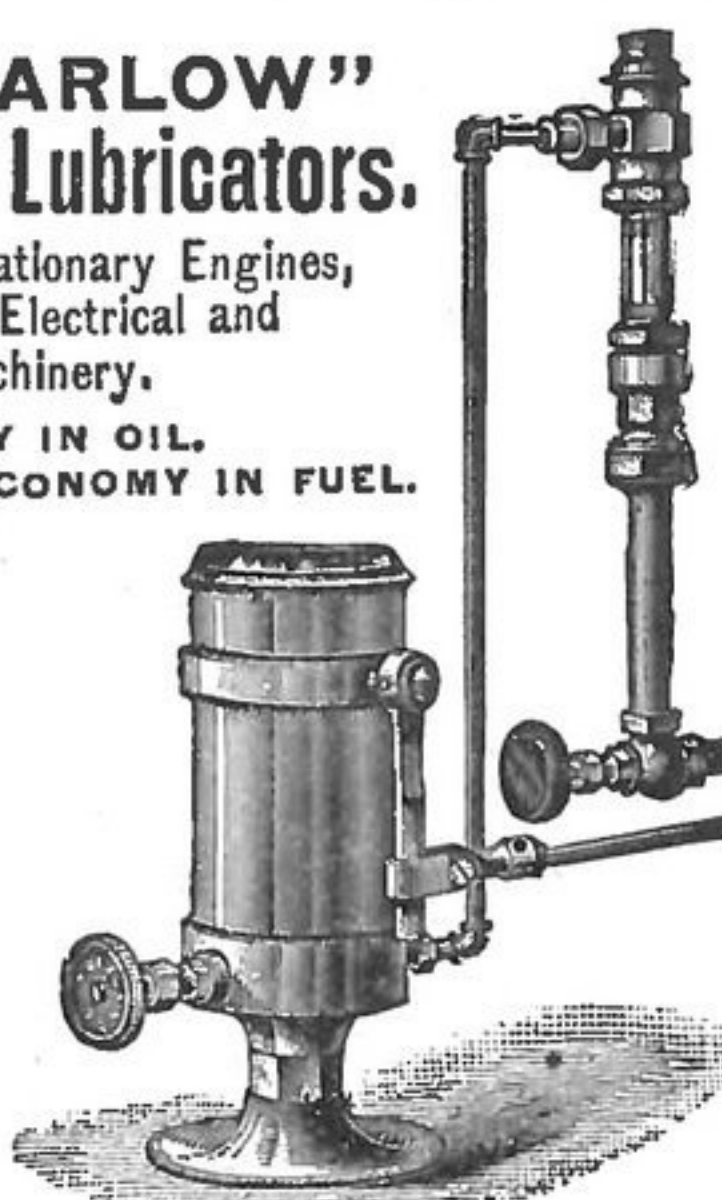
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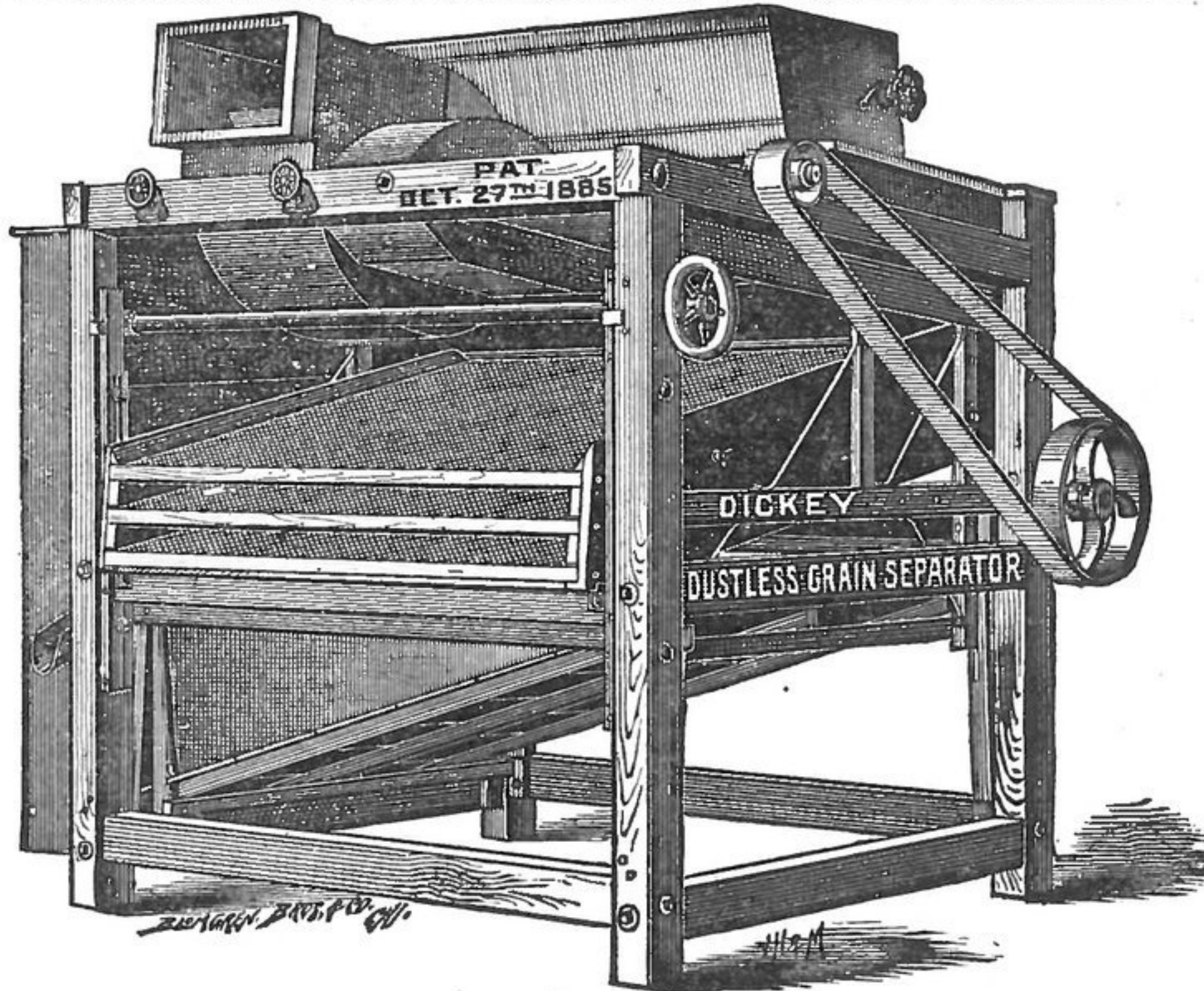
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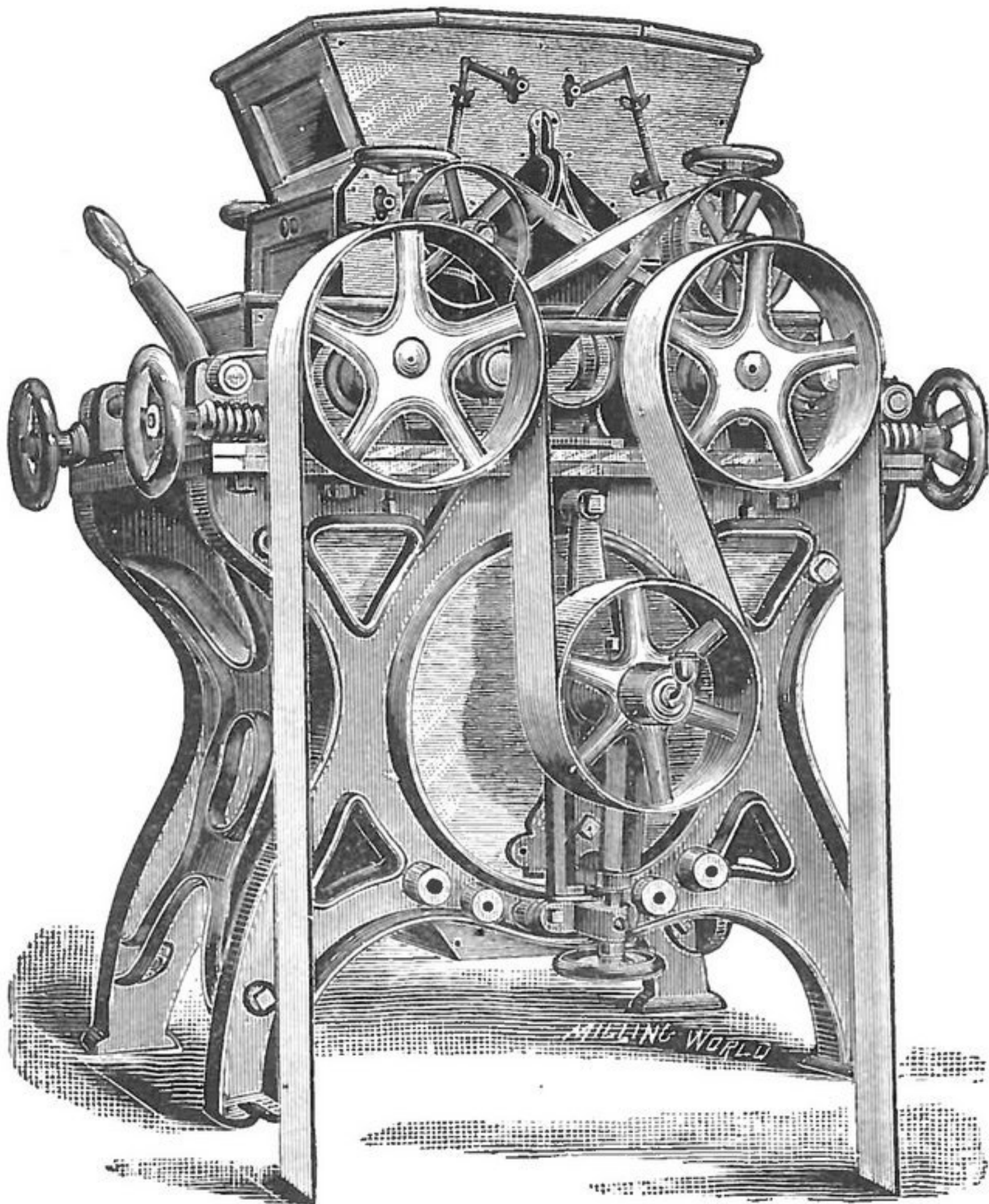
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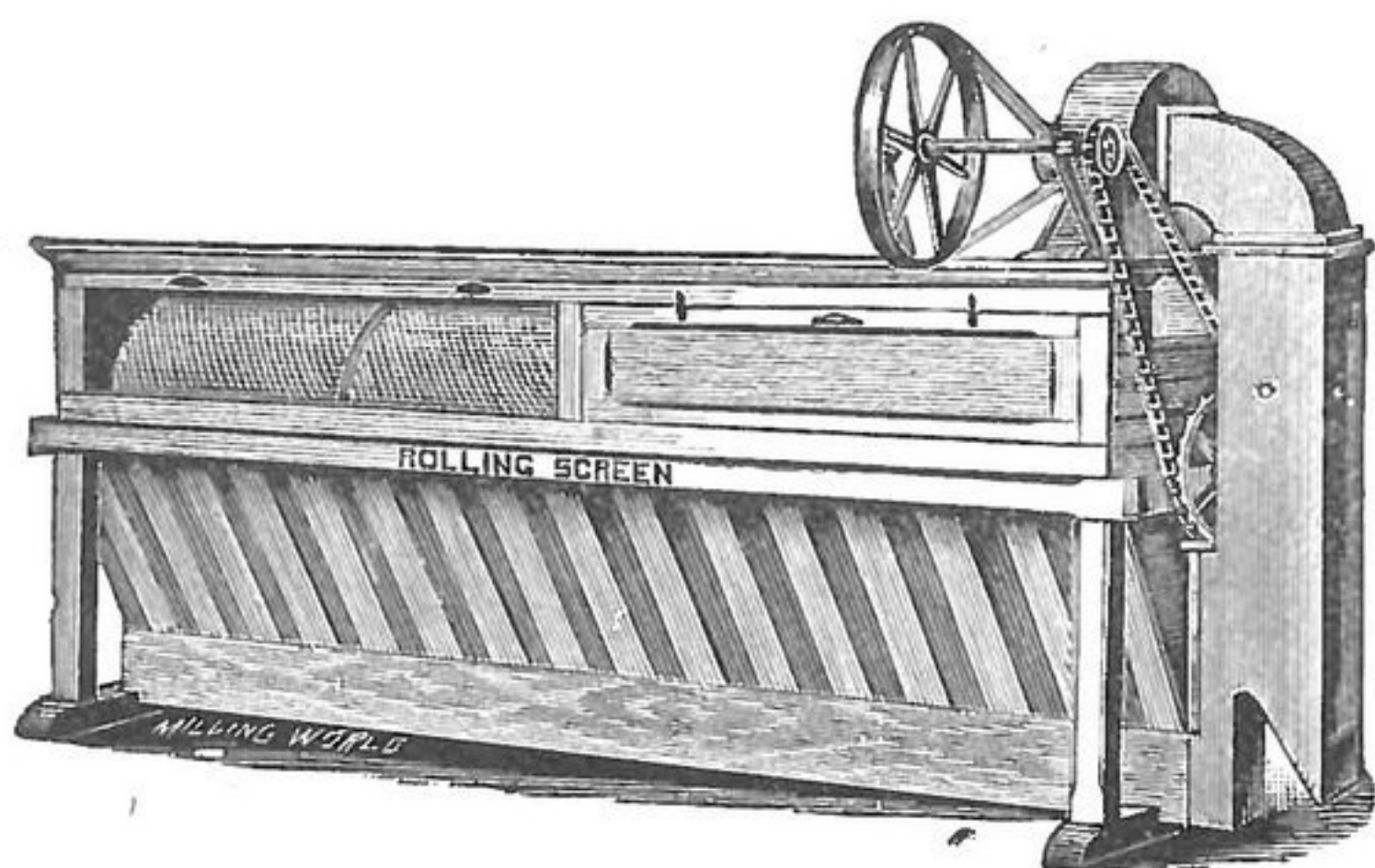
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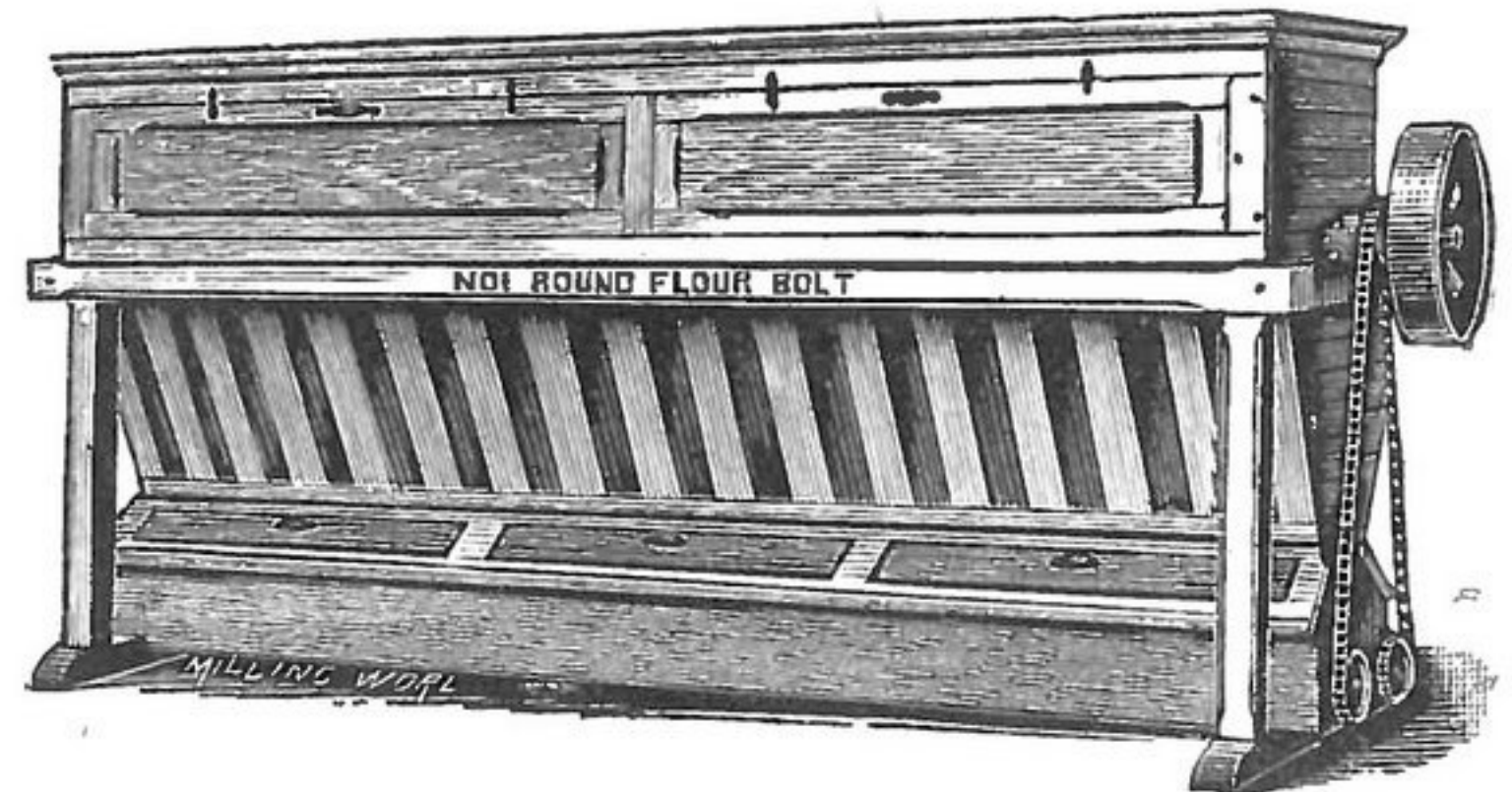
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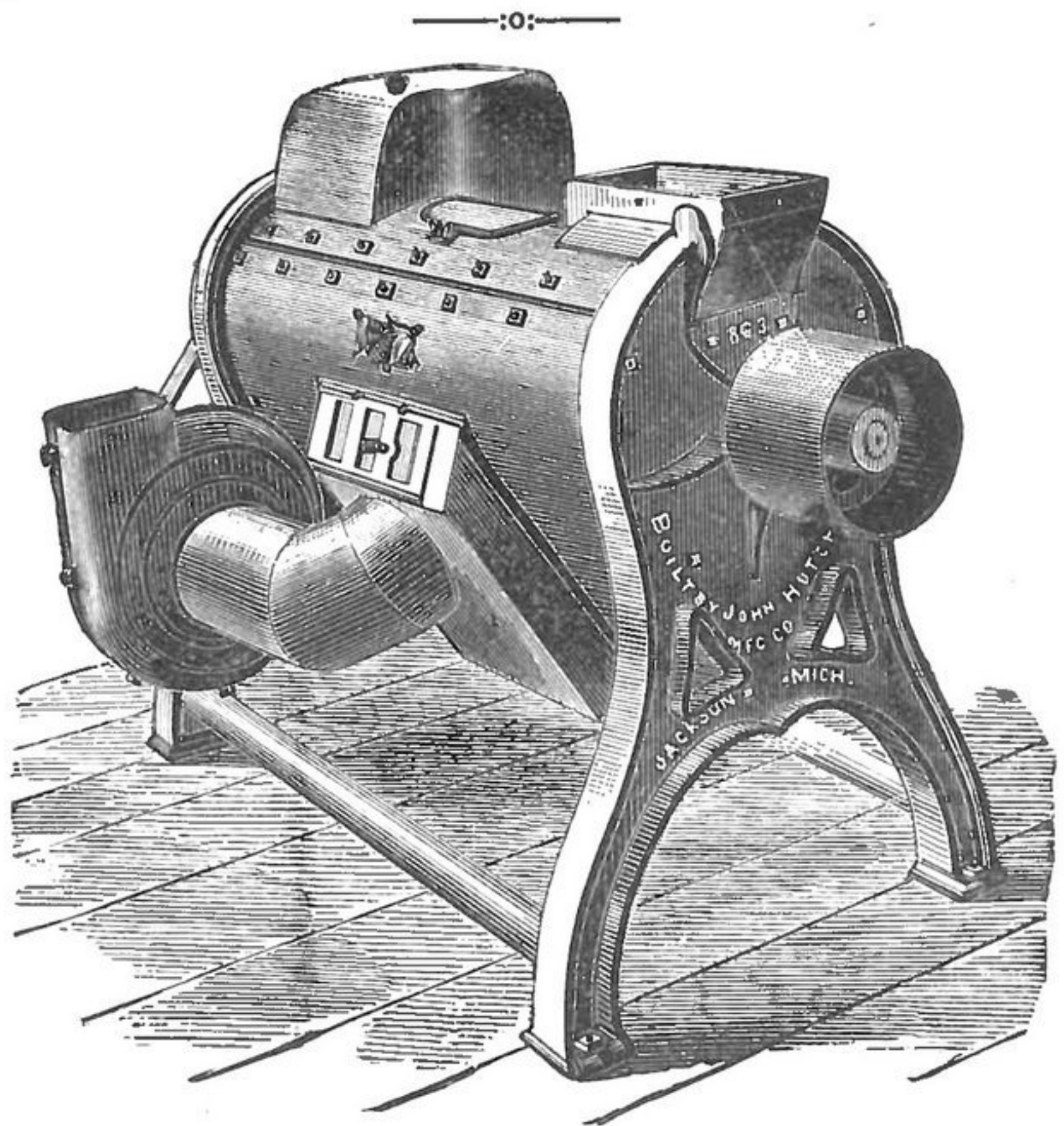


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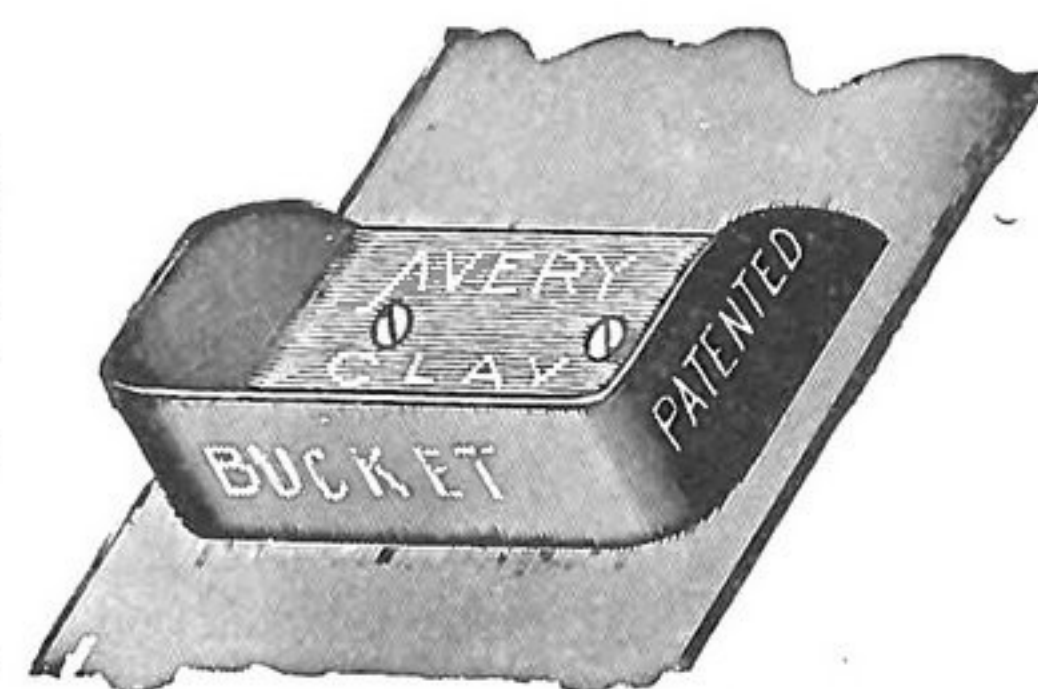
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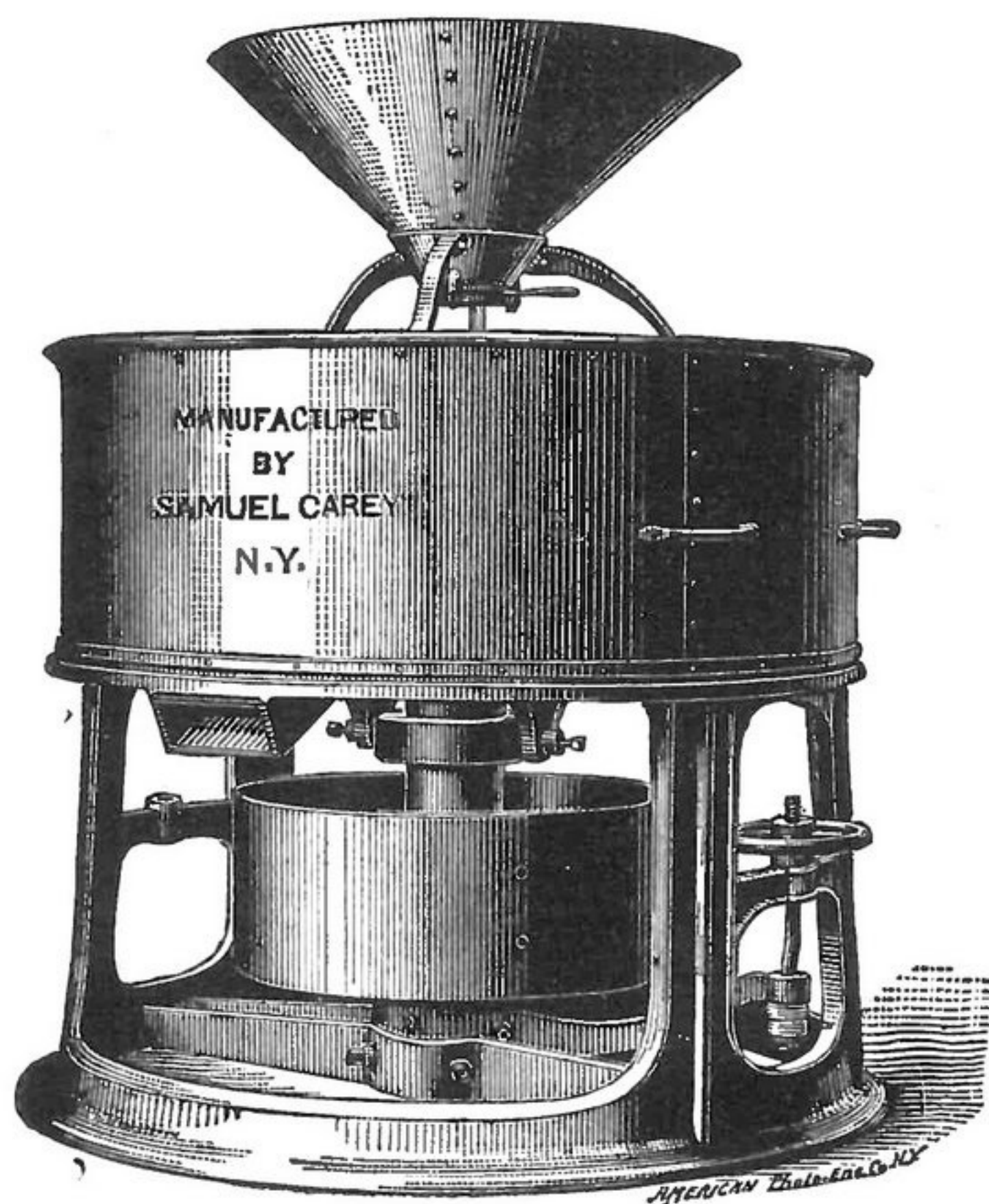
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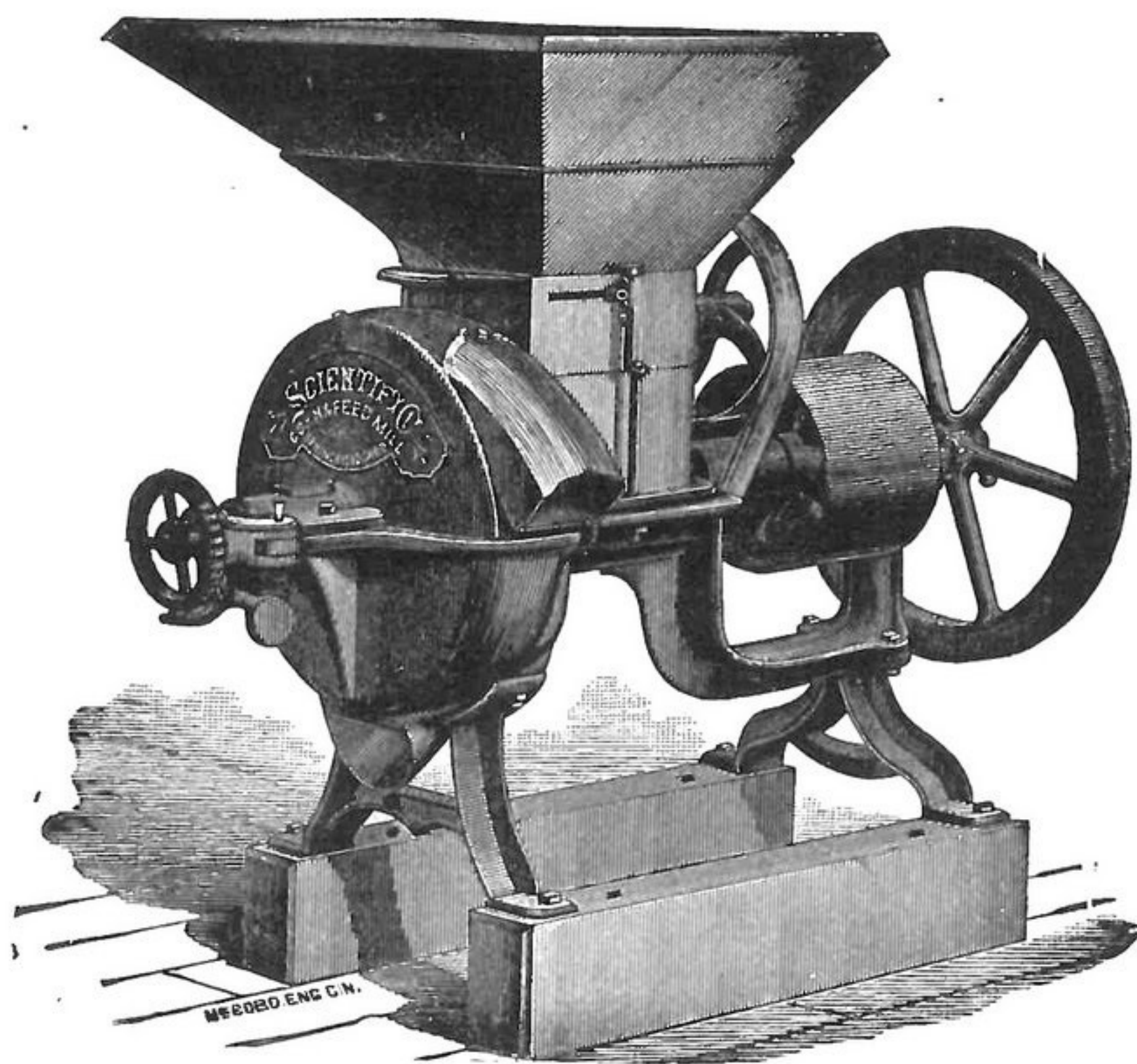
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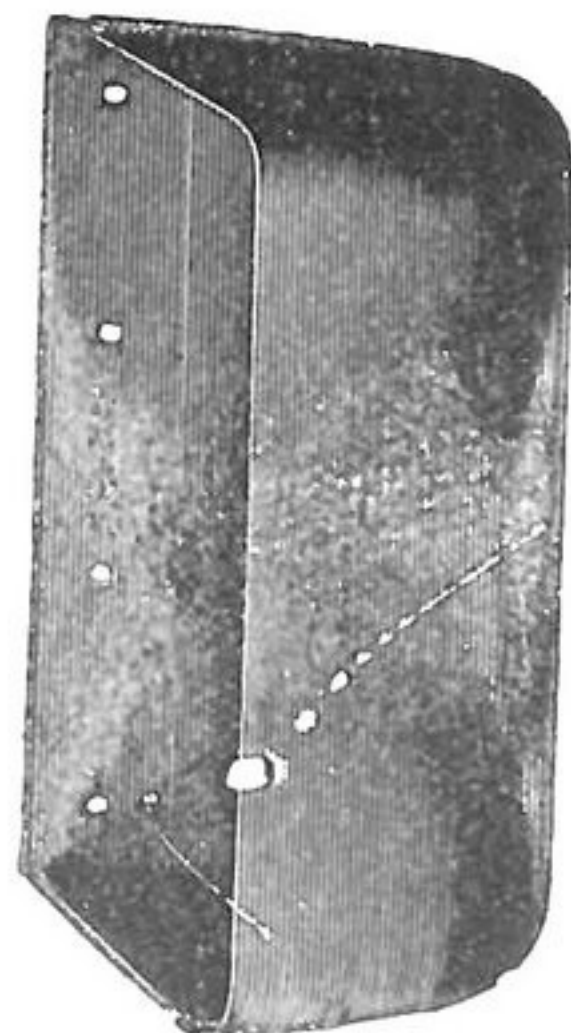
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